An Introductory Address

Delivered at the Opening of the Session at University College, Liverpool, on Oct. 12th, 1901,

BY OLIVER LODGE, D.Sc., LL.D., F.R.S.,
PRINCIPAL OF THE UNIVERSITY OF BIRMINGHAM.

GENTLEMEN,—When I left this city of my adoption, to take up closely allied but more various duties elsewhere, my regret at cutting short what might have been a life-work in the midst of tried friends was tempered by the reflection that perhaps after all I might be able to serve the city and the College from a vantage-ground of distance, and by means of experience gained elsewhere, even better than by continuing always in the same old groove of professional routine. I hope that so it may turn out. Meanwhile, I am asked by my late colleague, the indefatigable Dean of your Faculty of Medicine, to address you on this opening of session. If you had wanted a medical address you would not have come to me. If you had wanted a lecture on recent progress in physical science you would have selected some other occasion than the present. Evidently, I am expected to speak on some other topic, and I have no difficulty in guessing what that is. I have been only one year away from Liverpool, and on my return I find the atmosphere alight with two ideas, the idea of a cathedral and the idea of a university. When I left, these ideas were only smouldering, they had been smouldering for years; I could not tell how soon the breath of inspiration would reach one or other of them. I did not expect them to blaze simultaneously. The materials were there, and the spark was there, it needed only a fanning breath to start combustion and set the Mersey on fire. You will see to it that this most wholesome conflagration is not extinguished before its twin objects have been accomplished.

A year ago I confess I did not expect to find the full university ideal so prominently to the front; but any hesitation that might have been felt at urging it too hastily or inopportunely has been removed by the resolution of your council—your college council and likewise your city council—that a university for Liverpool was a necessity and that any step towards the furthering of that object would be welcome. With the passing of those resolutions the subject leapt beyond the pale of academic discussion, it entered the arena of practical politics, and became a prominent local question of the day. I need not recapitulate the advantage of the step when it can be taken. Those who wish information on the arguments for a teaching university, and on the special advantages of a university for Liverpool, will do well to read the articles which appeared in the local press from the pen of your junior historian, Mr. Ramsay Muir. Those who wish to realise the enthusiasm which can be excited in scholars by the idea of a civic university, and the crowning glory which such an institution can confer upon its parent city, should read again the wise and statesmanlike address given a year ago to the Council of Education by my friend, Principal Dale. In that address, I find that at one time educational institutions, like certain churches before the Savoy Conference, could be spoken of as "each sailing on its own way, in the vast ocean of these tumultuating times, and holding out not so much as a light to each other." That cannot be said of the English colleges now. The times are as tumultuating as ever, but the colleges of the country do not fail to act as beacons, each shedding an illuminating light or a warning glare on many sides. If I am asked, whence comes the illumination? I can reply, from nearly all of them in so far as they have adequate funds; and whence comes the warning glare?—it comes chiefly from those institutions which are crippled and hampered and struggling to do their best work with hopelessly insufficient means. It has not been always so, I suppose, in the history of the past. I can imagine an institution with more money than brains, but I do not find it among the university colleges. Their brains and energy and power of development are at present far in excess of their material resources. A most wholesome condition of things doubtless, but it would be good economy for the country to utilise this latent energy of development, this locked-up or potential metabolism, and to liberate it for the benefit of the whole national organism.

But there is one caution which, for whatever my experience is worth, I feel bound to give. Do not attempt to do everything by means of endowment. Endowment for chairs there must be, large capital expenditure on buildings and equipment there must certainly be, but for current expenses I would say retain a large margin of dependence on the living generation. Keep in close touch with the community. Do not seek for independence or isolation. Encourage the leading men to take a living and personal interest in college government, and give them plenty of real power. Welcome civic control. Do not attempt to found an isolated institution for imported scholars to continue their researches, and to train youth in learning out of touch with the life and activity around them. Keep in close touch with that life and activity. In every new departure carry the community with you. An alien intrusive growth is not wholesome. No matter if it is of superior texture to the rest of the organism, if it is not properly grafted in, it is liable later to be extruded. Spare no effort to represent truly the highest ideals of the community, to raise them where you can, but never to proceed independently of them. Sometimes it may involve delay, no matter; it is better to proceed by wise and secure steps than by rapid ones; the effort of carrying the community with you will be good and educative for both sides. It is part of the function of the college thus to educate the adult community, and it will find itself surprisingly educated and raised out of academic ruts in the process. Some right steps may be delayed, but also some false steps can be avoided, and whatever is done will be done in a solid and permanent manner, in a time that is ripe, so that there shall be no going back. There is an education of the council by the senate, but there is also an education of the senate by the council; and it is by the interaction of the two that the most splendid and permanent results may be expected. I confess that the form of government of these university colleges, if well and wisely worked in accordance with the intention of the framers of the scheme, seems to me almost ideal. There have been colleges, or times in the infancy of a college—never in this one of Liverpool—when the professors have felt themselves too tightly governed, where they lacked freedom and initiative, where all control was denied them, and where accordingly they ceased to interest themselves in anything more than their own departments,—a set of detached teachers rather than a coöperative and coherent college. But the conditions never lasted long. Either reform was pressed for from outside, as at Cooper's Hill, or else a wiser course was evolved from within, as at some colleges which need not be specified. Citizens need education just as much as students, we all need education together, and a few years of college government is a splendid training.

But how are you to get annual contributions from the living? What is the mechanism? Students' fees are one source. I hope that these will not be abolished either in Scotland or elsewhere. It seems to me eminently appropriate that those who utilise an institution should contribute something to its maintenance. Abolishing fees would mean cutting off a most proper and wholesome and reasonable source of revenue, and substituting something far less natural and genuinely permanent. Who is to say how long large invested endowment will continue to bring in a satisfying interest? In a century or two that may seem an artificial and extinct source of revenue, but the contributions of the living will never be artificial or inappropriate. How, then, is it to be attained? A sustentation fund, in the ordinarily understood sense, is a trouble to the treasurer and a burden on the few notably benevolent citizens whose shoulders already bear so much, and whose bounty in order to be given to one thing must be taken from another. No, there is a better kind of sustentation fund than that. A sustentation fund to which everyone must contribute, an amount which nobody feels, and a resulting income which is really worth having. I mean a city rate, or a grant from the municipality equivalent to a rate. A ½d. in the pound on a rental of £100 a year means 4*s.* 2*d.* Is there a single £100 householder who would resent such an annual charge as that, when he could be told that it meant £7,000 a year for the higher education of his town? And look at the capital that could then be set free for immediate development: it would be the equivalent of £200,000. One stroke, one municipal stroke, and your university might be founded. More is coming from the Government, I feel assured. This

country can no longer afford to neglect its higher education. More will be forthcoming from the Government, if more is forthcoming from the locality, the two will go together, and local support will, I expect, be the test of central contribution. It would act well all round. Every citizen would thus be contributing his mite. No citizen could any more be ignorant of what and where his university is, and it would keep us all in close touch with the life and the needs of the people. The end of my first message is:—Cultivate civic interest, and go for a city grant!

The influence of topography on development is very marked, and a city grant would have been easier to get if this college had been initially placed in a more central position, but through the action, wise or otherwise, of the late Mr. Cope this college has been placed here, for a definite reason—viz., in order to suit the medical school and the infirmary. Hence it is natural that those two institutions should have progressed with great rapidity since the college started. The infirmary has been wholly rebuilt, the medical school is rebuilding, and already in several of its departments, I hope that before long the same can be said for all, it is able to show a lead to the whole country.

It must have struck everyone connected with a college how much more thorough and complete the system of medical training is than the training thought sufficient in some other branches of practical learning. If it were like other departments there would be one professor of the subject, aided by two or three demonstrators, and there would be a two- or a three-years' course for students. The one professor would attempt to give or superintend instruction in anatomy, physiology, and pathology, in medicine, and in surgery, in forensic medicine, materia materia, and all the other branches now dealt with by an entire faculty. Fortunately the public realise that it would be unsafe for their bodies to limit the training of their future medical practitioners to a short course under one man and a few assistants. The vital importance of medical training to the community is realised, and accordingly it is entered upon in a thorough and whole-hearted way, with an adequate staff, plenty of subdivision, and exact attention to detail. But take some other profession. Take law, for instance, or engineering, or chemistry. At present one professor in each subject seems to be thought sufficient; and yet it would not be difficult to subdivide each of these great practical subjects into as many branches, or almost as many branches, as medicine. In Edinburgh, law *is* so subdivided, and its varieties are dealt with by six professors.

Take again commerce. There are places which are going to have a faculty of commerce. Towards such a faculty we are doubtless all feeling our way, but it seems to me that if we are to turn out men truly educated for the highest kind of commercial pursuits, if we are to raise the status of the commercial man into a truly professional position—a position which men of practical genius have already attained, and always will attain in small numbers by their own unaided abilities and strong character, if we are to raise the general level of commercial training and make it worthy of the greatness of the part which commerce plays and always has played in the history of the world,—we shall have to take a medical school as our pattern. One man cannot do it; a whole faculty is necessary, and the greater number of that faculty will, I expect, be men not holding endowed chairs, nor able to spare much time for teaching, but men really and actively engaged in the work itself; men of ability, leaders in business, who, like the prominent medical men in a city, may be willing to come down for an hour a day or a few hours a week, and give to students the benefit of their great and always growing experience. I do not say that it will be an easy matter to find men of business able and willing to do this, but I see no other way of getting it done that is likely to be half so good. I see no other way of dealing with the multifarious details and the immense variety of business transactions in such a place as this; and even now I feel that in this city we could put our finger on men who are competent to teach, and who might be willing to teach, and to fill up the outlines and fundamental principles laid down by a few endowed professors, from a sense of public spirit, and a feeling of duty which they owe to the coming generation and to the welfare of the country at large. So also some day it may be expected that, at one or other of the colleges, a theoretical faculty will arise, on lines not altogether different. And perhaps for all I know, in some places, a military and a naval college too. For all the professions, and for those subjects which are going to be professions, the example of a medical curriculum with its five years of combined theoretical and practical training seems to me the one to follow, with modifications appropriate to special cases. A university has an advantage over a college in its ability to legislate for itself and to try educational experiments. At the present time such experiments seem absolutely necessary in education; the time is crying out for them, and the more that are wisely tried in various parts of the country the better.

One felt advantage of local self-government—viz., that each municipality can try its own experiments—is not limited to municipalities. Every city needs water and gas and electricity and locomotion and police and education, and the establishment of these things in every separate city is, or may be virtually, a valuable experiment in each case. Before undertaking such an enterprise, the city magnates pay a visit to other cities where they have already been successfully established, they are welcomed and lunched and shown round, and on their return home they proceed partly to copy, and partly to originate. The multiplication of municipalities is therefore wholly good; why should the multiplication of universities be considered bad? It is not bad at all. In other countries no one for a moment imagines it to be bad. No one even here seems to object to the multiplication of churches or of schools, nor even of colleges, but about universities there seems to be thought something dangerous. I suppose this to be due to the long period during which those altogether exceptional institutions, Oxford and Cambridge, reigned supreme in this country, and to the corresponding superstition which came to envelop a degree as with a kind of halo. Nowadays the halo does not fit. Every grade of degree exists already; the same degree is conferred upon a poll man who just scrapes through with a minimum of attainment, and upon the first-class classic or the high wrangler; and the public already know quite sufficiently well how to discriminate. Any university of the future which lets its degrees down will speedily suffer. The kind of student whom laxity attracts will soon bring upon it the desired discredit. But in saying this, I hope that the degree standard will not be of the same *kind* everywhere. I hope that we shall not all be trying to do just the same thing. There is ample scope for individuality and difference of treatment. Such diversity would be another gain from the multiplication of universities. Take this parrot cry of opponents and inscribe it on your banner; convert it into a cry for progress. Let every city become a university when it is worthy, but take good heed that it make itself worthy first. My second message is:—Multiply worthy universities.

I have spoken of the technical or professional training that is rightly undertaken in a modern university,—on the demand for this training its progress and sustenance must always be largely based,—but I wish now to say a word on one narrow aspect of the culture that will be imparted too, on the unity of learning generally, on the literary and humanistic studies that will be encouraged, and I hope enforced to some slight degree on every kind of serious student, technical and other, so that no wholly illiterate technical graduate will ever be turned out. And conversely I should hope that no cultivated man will be permitted to graduate in a condition of entire ignorance of the laws of nature. The old apologue about gilding the pill, or giving jam with a powder, or administering any nauseous drug by means of a palatable vehicle, must be a *very* old one. I found the other day that it must be at least as old as Socrates, for according to the report of an anonymous and amusingly paradoxical article in the *Journal of Education* last year, Socrates is reported to have said, while dining in an open-air restaurant with the special correspondent Xenophon before the latter left for the front, that dry bread is unsatisfying, and so is jam by itself, but that the right method is to escort each mouthful of solid nutriment with a dash of something tasty. The parable is applicable to the joint administration to students of letters and of science respectively, but it is pointed out that there seems to be a curious uncertainty as to which is the bread and which is the jam. To an untutored mind it would surely appear reasonable that the hard facts of science, linked by mathematical and other theories into a coherent whole, should constitute the main aliment and the best training of the intelligence, but that these cold truths should be enlivened and made more palatable by admixture with something of more human interest, appealing to taste and emotion,—a confection say of history and literature,—

wherewith to escort into the brain the dry facts of science. Ancient practice, however, seems to invert this untutored notion, and whereas teachers of science are expected to be lively and to show brilliant experiments, the schoolmasters who deal with human learning seem to have acquired a prescriptive right to teach their subjects by aid of books and methods of the utmost dulness, if they choose, and to be entitled to force boys to swallow them by methods which excite emotions quite other than pleasurable; so that, in fact, the boys make resolutions, and actually (as has been said) carry them out in later life, never again to open one of those beastly books as long as they live.

I wonder if there is not something wrong here. It is pointed out in the article to which I refer that whereas science may or may not be amusing or interesting or absorbing, it at any rate does involve solid fact, some of which must be known, and much more of which might be known with advantage, by every educated man. Science, in fact, if it is unattractive, is at any rate nutritious; but literature and the arts generally if they fail to be pleasing and exhilarating do lack one attribute which one would think that they ought to possess. Take the preliminary examination or entrance in arts, for instance; you see what I am driving at. I suppose it is utopian but I should like to see it attractive. There are many medical and other professional men to whom literature is a solace, and who cultivate a fine taste for it in later life; surely they must feel grateful for having had a reasonable and happy preliminary-in-arts training, and for the compulsion which made them take it at some period of their course. But the minutiæ of grammar, and the technicalities of subjects in which we are never going to be anything but amateurs, are wearisome: I say this of the minutiæ and technicalities of science just as much as of anything else, they are wearisome, except to those who are going to be specialists; scholars and pedants cannot tell how wearisome; these have in their minds niches and pigeonholes gaping for these minutiæ, they enjoy them and rightly enjoy them: to them they are alive and full of meaning; but to the youth with no storage capacity an accumulation of such facts is a mere rubbish heap, and his mind has the aspect of a lumber room, until after the examination when he sweeps it out. I verily believe that too much of school study, in every subject, is spent upon these dull and speedily forgotten minutiæ. And at college let us discriminate between the studies which a man is going to profess and those of which he must needs have only a smattering, or what I should prefer to call a leaven. A professor of a subject cannot realise the scale or standard of the ordinary ignoramus, even of the average intelligent man. We are all ignoramuses to each other: reciprocal ignorance was largely the condition which prevailed round the senate-table when I was here, except of course in the case of the principal, who knew all subjects equally. But then we did not examine each other, we knew it was hopeless, we took each other's ignorance for granted; but we did not take the ignorance of examination candidates for granted, we set traps for their ignorance, and when we caught it we were properly indignant. I am not talking of higher studies or honours students but of elementary and general papers; these often seem to me too hard. Seldom or never can I do them.

I have been studying some school examination papers lately and I will take as an example geography. There was a paper on South Africa for a lower certificate set throughout the country. No doubt it was adapted to the teaching and to the book used; quite possibly the children answered it correctly; but there were places asked about of which a geographer to whom I showed it had never heard, and I doubt if the Colonial Secretary himself could have floored the whole paper. But now, taking geography as a kind of parable, an illustration which hurts nobody, suppose Africa, the whole of Africa, were being asked about. If the boy could sketch the position and the course of the Nile and the Congo and the Zambesi, if he knew the position and aspect of Cape Town and some of the ports and important coast stations, if he could place such countries as Morocco and Algeria and Dahomey, if he did not put the Transvaal in the middle of the Sahara—a location which some people are beginning to wish for it—he would know a good deal of what is really worth knowing and remembering, the kind of things which really are important to have in one's head, the kind of things he may remember to the end of his life although his work may lie in quite other directions. This kind of thing the boy ought to know and know thoroughly, not in a temporary manner. Moreover, he must be taught to *understand* maps: he should understand something of how they are made, he should have some practice in actually making them. He must be able to read their meaning, as a traveller does, if possible. He must know the broad features of the surface of the earth and the great and salient facts of each country, and he should study some small interesting district with fair accuracy and completeness, as a specimen. But for the rest and for the minutiæ he may refer to an atlas. Why seek to load the memory temporarily with a lot of detail? the memory declines to hold it for long, and it is a farce to ask questions on the hypothesis that such things can be really known in any useful or permanent fashion except by professed geographers. I do not mean that it is particularly hard to learn these little details and to hold them for a short time: some people find it fatally easy—I found it easy myself; but I deprecate the effort. It probably has indirect advantages, and I would not dogmatise: but when I hear talk about the General Medical Council raising the standard of the preliminary examination I get a little nervous. *Improving* the standard is all right, but raising it sounds dangerous. Very likely the recent pamphlet issued by that body is all on the right lines, I am not criticising it: so far as I remember it was on right lines and did suggest real improvements, but I do beg reformers to bear in mind the desirability of limiting the treatment of non-professional subjects to the main features and principles and outlines, to the things really worthy to be known and permanently known, and of seeing that these are known as thoroughly and pleasantly as possible, so that *taste* may be cultivated as well as memory, and a liking for subjects of general interest implanted—a wish to go further into them so soon as leisure permits. My third message then is (I trust that this part of my address is not too presumptuous—I give it with more diffidence than the rest):—Keep in touch with the schools, leave their teachers a judicious amount of freedom, let your control over school teaching be wise and cautious, and make the entrance or preliminary in arts attractive as well as compulsory.

The two functions of a university I have so far dealt with are both connected with the imparting of the inherited and accumulated wisdom and knowledge of the race—viz., (1) the awakening of interest and the development of intelligence; and (2) the implanting of such instruction and the training of such faculties as shall qualify a student for the calling by which he is to live.

But there is a third function of a university quite as important as the other two—viz., the increase or improvement of knowledge. Every improvement in knowledge tends to an increase of it, to actual discovery of new fact, but the actual attainment of discovery is not within our control, that comes sometimes unexpectedly, and seems to reward workers somewhat at random, but a steady attempt and desire to improve knowledge is within the scope of all. No one thing is known perfectly: it is remarkable how a familiar fact lights up afresh after a period of brooding on it in the light of theory and other facts. Thus it is, I suppose, that classical texts are improved, that the history of the past is deciphered, that works of literature or of art become better appreciated; and thus certainly it is that our knowledge of nature is gradually extended. The ancient formula of the Royal Society states that it exists "for the improvement of natural knowledge." I commend to your notice this word "improvement." I prefer it, as a conscious aim, to "extension." It leads to extension, but our primary aim should be improvement. Always seeking to know a thing better than we knew it before we shall find that as we get closer and closer to the heart of it, fresh and unexpected features make their appearance, appear as it were round a corner, and sometimes a whole landscape opens to the view. The guardians of knowledge *must* be improvers of it, else it begins to decay and to be lost. Constant effort is needed on the part of humanity to preserve intact even their material wealth. Leave things alone for a decade and nearly everything is rusted or moth-eaten or decayed. So it is also with the garnered fruits of learning, constant effort is necessary to preserve and improve them, and in the course of this effort discoveries will arise. The bringing down of fresh knowledge to the human race, henceforth to become part of its inheritance for ever: that is a daring and splendid achievement; it is given but to few, it is given only to those who strive early and late to improve and to increase that of

which they are already the custodians. A university is the corporate repository of learning, not of ancient learning only but of modern learning too; the most recently discovered fact of science there finds its natural guardians, and there it is that new facts should be born.

I commend this notion of "improvement of knowledge" to students—to every class of student. I confess that I am not enamoured of the phrase "research" when applied to the efforts of beginners. It is appropriate enough to the work of a Faraday, or of any master in science, but a beginner has no right to expect any but subjective discoveries, these latter he should constantly have in view; he should conscientiously set himself to improve knowledge, that is to say his own knowledge, to find things out for himself concerning any phenomenon that is set before him or which excites his interest, in whatever branch of learning it may happen to be; and if in the process he has the high good fortune to light upon something which his superiors consider to be of value, which is new not only to him but to them also, which is new to the world, he is heartily to be congratulated, and may feel thankful that he has received more than he is entitled to on his merits. The bare possibility of discovery awakens a kind of keen interest which nothing else can awaken, and the arousal of interest is the indispensable preliminary to real and lasting education. An atmosphere of constant effort towards the improvement of knowledge, with the accompanying stimulus of potential discovery, this is the atmosphere that should enfold every earnest student who enters the portal of a modern university.

A Clinical Lecture

ON

TUMOURS OF THE PAROTID GLAND.

Delivered at St. Bartholomew's Hospital on May 29th, 1901,

BY H. T. BUTLIN, F.R.C.S., D.C.L.,

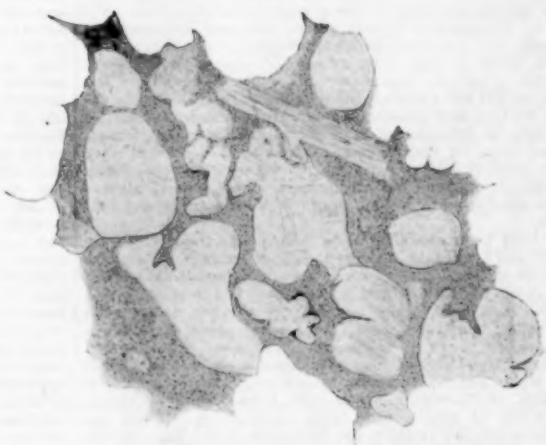
SURGEON TO THE HOSPITAL.

GENTLEMEN,—To-day I am going to talk, not on a subject with which I am very well acquainted, but upon a subject which has always been very difficult to me, and which I confess I am almost as much puzzled at now as I was when I first examined tumours of the parotid gland.

In the first place, let me say that tumours of the parotid gland present a very curious structure, and the structure has been either misunderstood or not understood properly—I cannot say which—by different observers during the last 25 or 30 years. As you know, the parotid gland is liable to tumours of two kinds—innocent and malignant. The innocent tumours in times past were sometimes called "enchondromata," when they were composed almost entirely of cartilaginous tissue; sometimes "chondro-fibromata," and sometimes "chondro-adenomata." At an earlier period still they were called "mixed parotid glandular tumours" or "parotid glandular tumours," "mixed connective tissue tumours," or "mixed tumours of the parotid," showing that they were composed of different kinds of tissue and that the exact composition of them was not a fixed quantity—that is to say, not nearly such a fixed quantity as it is in ordinary fibroma or sarcoma. Then people began to cut better sections of tumours and they were examined by more competent microscopists, or with better microscopes, or both combined. The men who examined them were in the habit of examining a large number of tumours of different kinds. They found a very curious structure in some of these tumours of the parotid—for example, a great part of the tumour was composed of connective tissue or of cartilaginous tissue, and then there were cells very similar to these cells which are represented here, which will do very well for the cells of a round-celled sarcoma. You see each one has its nucleus; the outlines are well defined, the cells are of tolerably equal size and only a little larger than the cells of an ordinary sarcoma. Still, they were round and they were nucleated, and they would pass for the cells of sarcoma. But they were arranged in a very curious way. I have given you here a rough outline of a picture which I made many years ago when I used to examine these tumours. Here are the pictures of a tumour (Fig. 1 and Fig. 2) which was removed in Henry Ward in 1877, and attached are some old notes of it. These cells were arranged in this curious pattern, a sort of network or plexus, and the intervening space was filled in with either mucous or fibrous or cartilaginous tissue, as the case might be. Seeing that these round cells occupied a very large part, and seemed to be a very important part, of the tumour, histologists of that time considered that it was a round-celled sarcomatous tissue, and these tumours were called "mixed sarcomatous tumours." Sometimes they were called "alveolar plexiform sarcoma"; they were called "alveolar" owing to the spaces in them and they were called "plexiform" on account of this network of round cells.

When I wrote the first edition of the "Operative Surgery of Malignant Disease" and began to study the results of operations for tumours of the parotid gland I divided them, as I did for every other part of the body, into sarcoma and carcinoma, and then I collected together, as I had done for other parts, those I knew of in the hospital and those published in the Transactions of the Pathological Society of London and various other books and papers. I put together a number of cases of sarcoma, perhaps 29 at that time, and the results were much better than for sarcomata in other parts of the body. I found to my surprise that sarcoma of the parotid gland was a comparatively innocent disease. I wrote at that time: "The results are so much better than for almost any other part of the body that I am sometimes tempted to doubt whether there has not been a mistake in the estimate of the real nature of the tumour. Many of the most successful results are, however, reported from Billroth's clinic; many of the tumours, if not all of them, were examined by competent microscopical observers and were regarded as clear examples of myxo- and chondro-sarcoma. ..... Of the most successful cases it may be shortly stated that the tumour, in the majority of them, was of small or moderate size and removed with little difficulty; it was not complicated by affection of the lymphatic glands; and that a single operation sufficed to rid the patient completely of the disease."[1] A doubt passed through my mind whether these were sarcomatous tumours. In 1894, some years after that was written, Mr. J. Bland-Sutton published his book on "Tumours, Innocent and Malignant." In speaking of the parotid gland he made the following remark: "I am at the present time

FIG. 1.

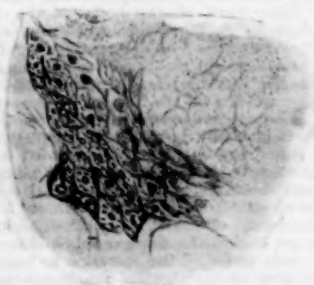


Under low power—to show plexiform arrangement.

[1] Operative Surgery of Malignant ease, first edition, p. 122.

unable to do more than direct attention to the chaotic condition of our knowledge regarding cancer of the parotid gland,"[2] and in that, I think, he included carcinoma and sarcoma. Then I began, a year or more ago, to work at the second edition of the "Operative Surgery of Malignant Disease," and when I came to the parotid gland I thought that I could probably deal with it much more readily than I had done 10 or 11 years previously. I have got the book here. I find that I looked out two papers in particular, one by a man called Nasse in 1892[3] and a second by

FIG. 2.



Under high power—to show oat-shaped cells like those of sarcoma, of which some of the trabeculæ are formed.

Rudolf Volkmann in 1895,[4] and in these two papers an entirely different view is expressed of the nature of these tumours. These gentlemen—and I think on very good ground—express the opinion that these so-called myxo-sarcomas and fibro-sarcomas and chondro-sarcomas of the parotid gland are not sarcomas at all, but that they are endothelial tumours and that the networks and plexuses of round cells are endothelial cells derived from the lining of the lymphatics and the blood-vessels. That assumption would, of course, cut out nearly all the cases of sarcoma which I had included in the 29 cases. This view seems to have gained ground amongst pathologists, with the result that not only are the sarcomas of the parotid gland very much diminished in number, but sarcoma there has been almost suppressed, and some pathologists are inclined to say that there is no such thing nowadays as sarcoma of the parotid gland. And, further, there is great doubt in the minds of some of these gentlemen whether there is such a disease as carcinoma of the parotid gland. That shows how, in such a study as microscopical anatomy, there is room for an enormous difference of opinion, and how pathologists may at one time be of one opinion and a few years later they may hold a totally different opinion, or two schools of pathologists at the same time may hold, one set one opinion, and another set another opinion, as to the meaning of the structure of a disease. So when I had to deal with this question I found that I could not deal with it in the same way as I could deal with the tumours of other parts of the body, dividing carcinoma from sarcoma, and I was obliged to put them all together as malignant disease of the parotid gland, and to try to find out what happened to patients who really bore the mark of their tumours being malignant disease.

To-day I have come to the conclusion—and you will presently see how perplexing the subject is—that the old sarcomata should be called endotheliomata mixed or simple, and that they are quite innocent tumours, because they are generally encapsuled. They do not always shell out easily, because they are embedded in the substance of the parotid gland; but there is no glandular enlargement—they have no aspect of malignancy, either clinically or microscopically. I thought that I would like to show you some of the patients on whom operations had been performed, so I sent for four patients and three of them have come. One of them is a man who has only just left the hospital and the wound has not healed. His was a case of malignant tumour without a doubt. Another patient is a woman on whom I twice operated, the first time in 1897, and removed a not very innocent-looking tumour which was said to be myxo-sarcoma with glandular tissue. It may have been an endothelioma. I operated upon her for a very bad recurrence in November, 1898, and I removed almost the entire parotid gland. I did not limit myself to removal of the tumour, because it was deeply embedded; it had spread so deeply into the structures about the parotid gland, and it seemed very malignant, and I felt that I had not taken it all out. She had facial paralysis after the operation, and I thought that I had cut the facial nerve through, but to-day you will see that she bears signs of paralysis of the lower part but not of the upper part of the facial nerve, and that she has only a very small recurrence of the tumour, and it does not bear any serious characters. If she will come into the hospital, as I think she will, I will remove it for her, and I shall be more hopeful of her case than I was before. Yet it is recorded as a case of malignant disease of the parotid gland on the second operation. Then comes the third case, a woman, 25 years of age. In 1898 she was operated upon, either at the end of October or at the beginning of November. I took out a small tumour, two inches by one and a half inches, from the parotid gland. There was no trouble with the facial nerve; the tumour was nodulated and moveable. Mr. F. A. Rose has copied from the notes that the skin over it was natural. At the operation the tumour was well encapsuled, easily dissected out, and when it was sent up for report it was described as a mixed-tissue parotid tumour—what I should now call an endothelioma. I sent for her to come up to show how nicely one can take out a tumour of that kind from the parotid gland, so as to leave a very small scar; there was no effect upon the facial nerve, and, in fact, it was what I considered to be a very nice case of surgery. Now that she is here I feel as if I should like to suppress her case, for she comes with a worse recurrence than the other patient. The tumour is attached to the scar and fills up the space between the mastoid process and the jaw, and so far from my being able to display to you my skill as a surgeon and the innocence of endothelioma of the parotid gland, her case illustrates neither one nor the other, and I am more puzzled than ever at the pathology of parotid tumours. The primary tumour was not a big tumour. I apparently took out the whole of it without difficulty, and I thought it to be perfectly innocent, while the microscope proclaimed it to be an endothelioma. Yet within four months of the operation it began to grow again and now it is as large as the tumour which was first removed. [Cases shown.]

The next question with regard to these tumours of the parotid gland is the effect on the facial nerve of innocent and malignant tumours respectively. On that point there is not absolute agreement, but there is a tolerable agreement amongst surgeons and pathologists that innocent tumours of whatever size seldom or never produce facial paralysis. Billroth pointed out some years ago that he believed that if a tumour of the parotid gland were associated with paralysis of the facial nerve that tumour would prove to be a carcinoma; he did not think that the innocent tumour or sarcoma produced paralysis of the facial nerve. But of course he had in his mind these tumours which I have spoken of which we do not now regard in the light of sarcomatous tumours. True sarcomas probably do affect the facial nerve. In proof of this I may mention a case which I had under my care in this hospital some two or more years ago. It was that of a female, 20 years of age, who came to the surgery with a small tumour of the parotid gland, in character very much like the tumour of that young woman who has just gone out. Although the tumour was moveable and perfectly circumscribed and apparently inclosed in a capsule, and although it had all the characters of an innocent tumour to the touch, yet it was associated with a slight paralysis, or rather paresis, of the branches of the facial nerve going to the orbicularis oculi. I took her into the hospital and we discussed her case in my class. I drew attention to the paresis of the facial nerve and then we discussed whether the tumour was likely to be innocent or malignant. I said that I had never seen an innocent tumour of the parotid gland which was associated with paralysis or paresis of any part of the facial nerve. So we come to the conclusion that in this case, in spite of the general innocent characters of the tumour, in all probability it was a more or less malignant tumour. I dissected it out and found it to be

[2] Tumours, Innocent and Malignant, p. 248.
[3] Langenbeck's Archiv, Band xliv., p. 233.
[4] Deutsche Zeitschrift für Chirurgie, Band xli., p. 1.

inclosed in a perfect capsule, but the facial nerve ran right along the upper part of it and was just caught in the capsule, and hence the paresis. I dissected the tumour out with very considerable care and there was no further paresis or paralysis of any other branch of the facial nerve. The tumour was examined microscopically and was found to be a well-marked example of spindle-celled sarcoma. So I expected this patient to come back in a short time with a recurrence of the disease, and I thought that in all probability the recurrence would be of the upper part on account of the obligation which I was under to keep close to the tumour to avoid cutting through the facial nerve, which is a serious matter for a young person. She did, indeed, come back to the hospital two years afterwards with a tiny recurrent tumour, but instead of its being in the upper part it was in the lower part of the parotid gland, quite away from the place where I thought I might have left part of the capsule. I cut the recurrence out for her. It was circumscribed and moveable and again bore the characters of a spindle-celled sarcoma. That occurred two or three years ago, so that at any time we may have a visit from her, and then I may find that she has recurrence of the disease.

Curiously enough, in looking into the accounts of the surgery of parotid tumours a good many years ago I found that Billroth again, in his Clinical Lectures, says that although he has never seen paralysis of the facial nerve as a result of pressure of an innocent tumour or sarcoma of the parotid, he has seen it very frequently as a result of operations for the removal of these tumours; from which I judge that, believing the tumours to be malignant, he himself was in the habit of removing them very much more freely, and a larger portion of the parotid gland and tissue around, than we have been doing in this hospital. I cannot remember paralysis of any part of the facial nerve after an operation for removal of an innocent tumour, and I should speak similarly for the practice of my colleagues which I had an opportunity of watching when I was registrar here. Every surgeon here who had a parotid tumour to remove dissected it out with great care and I do not remember a case in which the facial nerve was wounded in the operation, and I wondered whether that was not due to the influence of Sir William Fergusson who was one of the greatest surgeons in London 40 years ago. A distinguished operator told me that when he himself was quite a young man and just beginning to get into practice a lady came to him with a small tumour of the parotid gland. She was a person in society, young and good-looking, and she was naturally very anxious about her personal appearance. He said to her, "Well, madam, you can have it removed." She said, "What will be the effect if I do have it removed?" He said, "I think you will do very well." She said, "What will be the effect on my appearance?" He said, "Well, it is quite possible that the facial nerve may be wounded in the course of the operation." As to that she asked, "What effect will that have upon me?" He replied, "Well, I am sorry to say that you will not be able to close your eye and your mouth may be a little drawn to one side." She consulted other surgeons, and among them Sir William Fergusson. She said to him, "What about this tumour?" He said, "Well, you can have it out." "But what about the facial nerve?" "The facial nerve? If anybody is fool enough to look for it he may wound it, but if you have it out the surgeon will not look for the facial nerve." That is the course we have adopted in this hospital. I read of the different relations of the facial nerve to innocent tumours of the parotid gland, how in one case it runs in front, in another case behind, and in another case right through the tumour. I have never seen the facial nerve running through an innocent tumour of the parotid, and I never have dissected the facial nerve from the surface of one of these tumours. I never have seen it underneath because I have not looked for it. I believe that that is the case with nearly all innocent tumours of the parotid gland. Keep close to the capsule and shell the tumour out carefully, and do not get straying about to find out the relations of the tumour to surrounding parts.

I must confess that the surgery of malignant tumours of the parotid gland here, both in my own practice and in that of everybody else, has not been, as far as I know, at all successful. I have removed a tolerable number of these tumours, possibly more than my share, here because I get a good deal of tumour surgery in the hospital. I have generally dissected the tumour out, keeping close to its capsule and being very cautious not to wound the facial nerve if I could help it, on account of the disfigurement, and not to run into the vessels which lie in and beneath the parotid gland. I was of opinion that, taking into account the liability of the neighbouring lymphatic glands to secondary infection, and seeing what difficulties there are in a free removal of these malignant parotid tumours, the surgery of them must necessarily be very unsatisfactory. I was of that opinion until I began to write the second edition of my book, and on looking up the literature of the subject I came upon a paper by Mandowsky,[5] Professor Schüller's assistant, saying that Professor Schüller had made up his mind that the surgery of malignant tumours of the parotid gland was not as good as it ought to be because we did not deal with the cases in the same fashion as we dealt with malignant tumours of other parts of the body—of the breast, for instance. Professor Schüller had been acting on this for some time past, and had been removing not merely the tumour but had taken out the parotid gland by a regular set operation, clearing out the gland with the tumour in it and not examining too closely the tumour or the surrounding parts. He had been prepared for paralysis of the facial nerve, which is generally inevitable in complete removal of the parotid gland, but he entirely disregarded this, and he thought that disfigurement was a matter of no consequence compared with freedom from the disease. He devised an operation by which he laid back the skin, as I have done here, and instead of dissecting from below, as most people would do, to get hold of the great vessels and secure and tie them at an early period of the operation he began in front, raising the skin up off the masseter muscle and the glandula-socia. Finding the limits of the gland in front he dissected it out from the upper and front part, and secured the vessels by double ligatures as they were divided. He found that it was easy, or at all events not difficult, to clear out the entire parotid gland, of course with the facial nerve and the tumour. He found that as the operation proceeded the tumour and the gland, instead of having to be raised up in order to get at the deeper parts, gradually fell backwards, and so the operation was rendered more easy the further he got. I have practised this method on two or three occasions and I did so for this man whose wound is not yet well. Some of you saw the operation and you saw that the parotid did not fall backwards, but stuck to everything, and that I removed the disease with very great difficulty. The glands were affected at the lower part and I do not think that I entirely removed them. In fact, the disease was so extensive and the bone was so involved that I am sure that I did not take the disease completely out.

I am afraid that neither this nor any other operation will be of use against advanced malignant disease of the parotid gland. The limits of the gland are over-passed and the neighbouring glands are already affected. But against malignant disease at a much earlier period Professor Schüller's suggestion appears to be very reasonable. If you practise it by-and-by, as some of you may do, I am almost disposed to advise you not to study too closely the anatomical relations of the parotid gland. Your business is to keep close to the capsule which incloses the parotid gland and to take it away with all that it contains, including the facial nerve and, of course, the malignant tumour. While considering this lecture it occurred to me that I ought to make myself familiar with the neighbouring anatomy and that I would impress on you the number and nature of the parts which are in relation with the parotid gland. As I had forgotten some of them I took down Gray's "Anatomy" and read them through, and I confess that I was aghast at the perusal and wondered how I could have dealt with so many and such important structures and left the patient still alive. Yet here he is, and the other patients on whom I have performed a similar operation made quite as good a recovery. So I determined to advise you to do what I have just said: keep close to the capsule of the gland and secure and tie the vessels as, or even before, they are divided, and not to trouble too much about their names and quality. Make a large incision, and a second cross-incision if you choose, and expose the field of operation in such a manner that you can see well where your knife is working, and always remember that you are dealing with a terrible disease, and that risk of life and disfigurement is quite justifiable in the attempt to remove it thoroughly.

I wish I could give you some good rules for the early diagnosis of malignant tumours of the parotid gland. The

[5] Aerztlicher Praktiker, 1894, Nos. 32 and 33.

diagnosis is easy when the disease is advanced, but it certainly is not easy when the tumour is still well within the parotid gland. This is one of the points to which attention must be directed in future.

Now, gentlemen, I am conscious that this lecture is very defective. It is defective in knowledge of the diseases of which I have been treating and it is defective in knowledge of how to deal with them best by surgery, particularly the malignant diseases; but I chose this subject because every now and again I like to lecture on something which I do not know well, in order to review the subject and to see what new lights it presents, and if I am asked by any one of my past house surgeons or by somebody who is about the hospital to recommend them a piece of special work I am sure that nobody could do better work or work which is more likely to bring credit to himself and to surgery than he who engages in work upon these tumours. Let him take the whole subject up afresh and work from both a clinical and a pathological standpoint. The material in this hospital is very rich. He will find here a most interesting series of tumours, including one melanotic tumour of the parotid and one partly melanotic tumour of the same region. He will find also sections of a certain number of these tumours in the microscope box upstairs, and he will find a much better account of operations and the connexions of the tumour than he would have done years ago, particularly in my own wards, where the notes have been taken with considerable care by my dressers. He can search out patients and can trace them, and he can also use my private notes and drawings of parotid tumours removed in this hospital many years ago when I was surgical registrar. I wish that I could persuade somebody to take this up and to give some months to it. It is worthy of being the subject of a treatise for a degree at one of our universities; but I think it is worthy of something more than that: it might make a very good monograph—a monograph founded, I think, on extraordinarily rich material.

DEVELOPMENTAL (MYELOGENETIC) LOCALISATION OF THE CEREBRAL CORTEX IN THE HUMAN SUBJECT.[1]

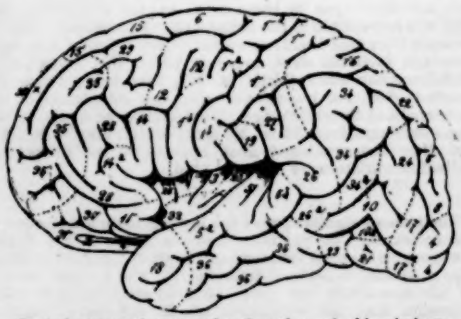
BY DR. PAUL FLECHSIG
OF LEIPSIC.
(*Translated for* THE LANCET.)

I.

THE following remarks are founded partly upon researches carried out some time ago and partly upon unpublished new researches undertaken on the human subject exclusively, and therefore of especial value in this respect.

In the cerebral convolutions, as in all other parts of the central nervous system, the nerve-fibres do not develop everywhere simultaneously, but step by step in a definite succession, this order of events being particularly maintained in regard to the appearance of the medullary substance. In the convolutions of the cerebrum the investment with medullary substance (myelinisation) has already begun in some places three months before the maturity of the fœtus, whilst in other places numerous fibres are devoid of medullary substance even three months after birth. The order of succession in the convolutions is governed by a law identical with the law which I have shown holds good for the spinal cord, the medulla oblongata, and the mesocephalon, and which may be stated somewhat in this way—that, speaking approximately, equally important nerve-fibres are developed simultaneously, but those of dissimilar importance are developed one after another in a succession defined by an imperative law (Fundamental Law of Myelogenesis). The formation of medullary substance is almost completed in certain convolutions at a time when in some it is not even begun and in others has made only slight progress, so that the convolutions are divided at certain periods of age into regions which are (1) well provided with medullary substance, (2) scantily provided with medullary substance, and (3) altogether devoid of medullary substance. Thus there come into existence sharply circumscribed areas differing in the stages of development of their elements[2] which I call myelogenetic cortical areas. These fields are constant in arrangement; they repeat themselves in essentially the same position and extent in all individuals of approximately the same age. The contours do not change perpetually with the progress of the medullary investment, but show during a certain period the same type, a fact which obviously depends upon the general character of the myelogenetic differences. It has been said (1) that the formation of medullary substance spreads from certain points in the cortex—to some extent in concentric rings—over the surface (Vogt), or that the order of succession in which the nerve-fibres receive medullary substance is in relation to the diameter of the fibres (Vogt), or (3) that this order of succession is in relation to the position of the blood-vessels (von Monakow). These opinions, however, are generalisations from accidental phenomena, and when treated as a whole they are found to be ill-supported and totally useless from a scientific point of view. (Fig. 1 and Fig. 2.)

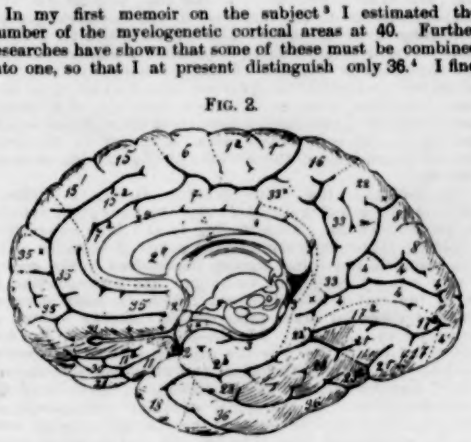
FIG. 1.



Cortical areas on the external surface of a cerebral hemisphere.

In my first memoir on the subject[3] I estimated the number of the myelogenetic cortical areas at 40. Further researches have shown that some of these must be combined into one, so that I at present distinguish only 36.[4] I find

FIG. 2.



Cortical areas on the internal surface of a cerebral hemisphere.

[1] A paper read at the International Congress of Physiology at Turin. Owing to the operation of a time limit in the delivery of the address some passages here shown had to be omitted from the paper as originally written.

[2] The protoplasmic processes of the ganglion cells are also formed in different areas at different times. This is another instance of periods of time arranged in conformity with a natural law.

[3] 1896. Neurologisches Centralblatt, No. 21.

[4] In my report to the Paris Congress held in 1900 I pointed out that the number 40 must be taken as a provisional estimate. The diagrams of my cortical areas which Hitzig gave in the Comptes Rendus of the Section for Neurology (Pl. II.) are useless. They are neither copies of my drawings of 1896 (for here the areas nowhere show contours) nor of any other illustrations whatever that have been published by me. They are simply of the nature of misconceptions, enlarged reproductions of private communications (rough sketches) which being incomplete were not intended for publication and which in the form given to them by Hitzig can only lead to confusion.

it useful to denote the areas simply by numbers (1 to 36) corresponding to their respective places in order of development, and therefore wholly chronological. In order to present a comprehensive view, and having regard to differences of a general nature, I have classified them in the three following chronological groups: (1) regions of early development (primordial zones); (2) regions of intermediate development (intermediary zones); and (3) regions of late development (terminal zones).

As the process of myelinisation presents no distinct intervals, the fixing of the limits of these groups is to some extent a matter of individual opinion; there are not as yet any definite landmarks to go upon. In my first memoir I assigned to Group 1 the areas which showed a comparative preponderance of medullary substance at birth at full term—i.e., the areas numbered 1 to 8. Further investigations have convinced me that as a rule the number of areas in which myeline formation has at least commenced before birth at full time is greater than this, including as a maximum the areas as far as No. 20, but sometimes only those as far as No. 12. The extent to which the medullary substance has spread at the time of full development of the fœtus is therefore not available in all cases as a principle of classification. Nevertheless, the areas numbered from 1 to 10 have this in common, that in full-term fœtuses the formation of medullary substance has, as a rule, not only begun in these areas but has advanced so far that it is perceptible to the naked eye. I accordingly reckon Group 2 from area No. 11 onwards. Under Group 3 I some time ago included those areas in which the formation of medullary substance (birth at full time being taken for granted) does not begin until after the completion of the first month of the child's age. This applies, as a rule, to the areas numbered from 32 to 36, occasionally, also, to No. 31; but this last-mentioned area appears to me to present individual variations of a special kind.

II.

The general significance of the myelogenetic localisation of the cortex may be put into words as follows. Every area possesses a special anatomical position and, therefore, also a special functional importance. For a great number of the areas this can now be absolutely proved. [The objection that the recognition of 36 different "organs" in the cortex means a falling-back to the phrenology of Gall, and other objections of a like kind, may be met by a simple reference to the fact that it was the myelogenetic parcelling-out of the surface of the brain which for the first time provided tangible and comprehensive anatomical data for the scientific solution of the questions involved, and which revealed points of difference that had not up to that time been even suspected.] The average size of a cortical area (about 20 square centimetres = three and a quarter square inches) is very considerable when compared to the much smaller dimensions of the medulla oblongata with its many centres.

Anatomically, the areas forming Group 1 (primordial zones) are distinguished above all by their great richness in projection fibres (fibres leading to and from sub-cortical centres). This group contains the points of entrance of all the channels conveying sensory impressions to the cortex. Every sensory peripheral end-organ has corresponding to it in the cortex a well-defined region of early development (primordial zone)—the cortical sensory centre or sensory area. Area No. 2 is the olfactory centre, No. 4 is the visual centre, No. 5 is the acoustic (cochlearis) centre, and so on. From pathological and other phenomena area No. 1 may be regarded as the end-organ, especially of the posterior columns of the spinal cord and consequently of the posterior roots; the nerves of the skin and muscles seem to be represented here side by side. For many primordial zones (as for instance the gyrus subangularis No. 10) it is for the present unknown whether they are in relation with any peripheral end-organ at all.

The individual sensory areas are separated from one another by wide tracts of cortex (intermediary and terminal zones) in which sensory fibres cannot be followed up. Moreover, the known motor fibres originate in and immediately beside the regions of early development (primordial zones), such as the pyramidal tract in No. 1, the motor part of the inferior fornix in Nos. 2 and 3, the inner fasciculi of the ventral part of the cerebral peduncle (pes or basis or crusta pedunculi) in Nos. 1*b*, 6, 12, 14, and 15. Only with respect to the external fifth of the pes pedunculi (column of Türk) is there a controversy as to the cortical regions of origin (Nos. 5 and 36). From No. 4 a set of fibres can be followed (in secondary degenerations and in newly-born infants) up to the central medullary substance of the anterior corpora quadrigemina; these fibres are lost in the "secondary" visual radiation (Flechsig). Therefore to every sensory path there corresponds a motor (corticofugal) tract. One may speak, therefore, of conjugate tracts or columns (Strangpaaren). With regard to their position within the corona radiata, they in general follow the law that corticopetal lines of communication are placed laterally with respect to the centrifugal ones.

In the primordial zones the corticopetal and corticofugal fibres do not mingle uniformly. It may be specially remarked with reference to No. 1 that the tactile radiation passes over for the most part into the posterior central ascending parietal convolution and only with a few fibres into the anterior central, whilst the undoubtedly motor pyramidal tract originates to a great extent from the anterior central ascending frontal convolution and to a less extent from the posterior one. Area No. 1 is therefore composed of a preponderating sensory and a preponderating motor division. A purely sensory or a purely motor area cannot be outlined anywhere. The auditory sphere (No. 5) to which fibres lead from the internal corpus geniculatum and thalamus, which may be denoted as the auditory radiation (and eventually as the cochlearis radiation)[1] according to my researches (in cases of secondary degeneration), sends fibres into the column of Türk—fibres which to all appearance terminate in the pons and convey corticofugal impressions. Whether they are to be considered as motor fibres is not quite decided. To all appearance their origin projects somewhat beyond the region of the auditory radiation and extends also to the part of the second temporal convolution hidden in the first temporal furrow; it is therefore a cortical region immediately adjacent to the auditory sphere. It is very questionable whether the convex part of the second and third temporal convolutions belong to this zone. In the cortex they lose the arrangement of the fibres which is characteristic of motor regions, whilst this type is very prominent in the auditory sphere and immediately beside it in the second temporal convolution. Therefore in the event of the columns of Türk fulfilling motor functions (motions of the body and head in consequence of auditory impressions?), it will have to be admitted with respect to the auditory sphere that here a motor and sensory area are united in such a way that they partly coincide and partly perhaps do not coincide. Here, as in the cortex generally, an entirely motor or entirely sensory area is not recognisable.

In the regions of late development and in most of those of intermediate development the corona radiata is not represented. The projection fibres therefore undoubtedly diminish in number here in comparison with the primordial zones. This is the case not only in newly-born children, but also in children of the age of four, five, seven, and eight months. It has been said that the scanty occurrence or complete absence of the projection system in the cortical areas of late development is quite an illusion, and that the corona radiata appears here only at a later stage, but this objection has little to support it. At no period of age do I find clearly differentiated fasciculi of the corona radiata. Some projection fibres may be recognised in the intermediary zones and occasionally also in the terminal zones, but they sink into insignificance in presence of fibres of a different kind.

The normal adult brain presents conditions too complicated to permit of positive opinions being arrived at. But two of the most important *projection* systems (the fasciculus longitudinalis inferior and the cingulum) have been declared to be *association* systems, and the descriptions of the brain in the most recent articles by von Monakow, Déjerine, and others propagate these quite incomprehensible errors as if they were established facts. Nowhere in adults do I find fasciculi of the corona radiata which might not occur in children aged three and a half months, the children having been born at full time. In them the extension of the corona radiata can be clearly seen, and it is plain that the convolutions which contain abundance of projection fasciculi have others opposite to them in which it is hardly possible to find one such fasciculus.

It is also a complete mistake to assert that secondary

[1] The position of the vestibularis conducting fibres in the corona radiata is not yet determined; indeed it is by no means proved that the semicircular canals are in connexion with the cortex of the cerebrum although it is extremely probable.

degenerations in the adult human subject prove the contrary. If everything that has hitherto been published in support of this view is brought together it will be found that not even half a dozen cases are recorded which supply incontestable data, and of these the majority are referable to two areas, No. 1 and No. 4. For the other areas neither von Monakow nor Déjerine has quoted cases which could really decide the question in terms of the corona radiata. I wish here to make this statement only for the last three terminal zones, since Déjerine has said that he has specially investigated uncomplicated cortical lesions, even quite superficial ones, of these regions, and has always found fasciculi of the corona radiata in a state of secondary degeneration. But taking the case of area No. 36, in the alleged uncomplicated lesions of this area there is always accompanying derangement of either the first temporal convolution (acoustic sphere) or of the visual radiation. With regard to area No. 35, Déjerine describes what he calls an uncomplicated superficial lesion and deserves our thanks for having given a drawing which enables an idea to be formed of its extension in the direction of depth. From this it is evident that in reality the primary softening of the first and second frontal convolutions has not only reached the corona radiata of the gyrus fornicatus traversing the frontal medullary substance but has partially disorganised it, and it is anything but surprising that secondary degeneration of the anterior pedicle of the optic thalamus should be transmitted in the thalamus to regions the connexion of which with the gyrus fornicatus can be recognised from a study of the history of their development. How little all these drawings prove is abundantly plain from the fact that in the same case an identical degeneration is found in the optic thalamus on the opposite side, but is here due to a focus of disease "in the third frontal convolution."

Finally, the case of superficial disorganisation of the gyrus angularis (area No. 34), a lesion which is in this instance alleged to be uncomplicated, is in reality not concerned with this convolution exclusively, for areas No. 26, No. 27, and No. 5*a* are also disorganised. Neither is the softening limited to the cortex; on the contrary, it has penetrated to the optic radiation (corona radiata), so that on every sound principle there is no reason for bringing the secondary degeneration found in the corona radiata and optic thalamus specially into relation with the degeneration of the cortex of area No. 34.

Moreover, the cases of foci of subcortical softening, which have served for investigations of secondary degeneration in the corona radiata, entirely fail to support the opinion that the terminal zones No. 34 and No. 35 are provided with a corona radiata. In a case described by von Monakow, in which there was a focus of softening in the thalamus opticus with fibres of the corona radiata in an alleged state of secondary degeneration present in the whole of the upper part of the cerebrum, not only was the examination made by a quite inadequate method (the use of carmine) but the case was, moreover, so greatly complicated by the occurrence of numerous miliary foci in the parieto-occipital lobe that definite conclusions seem to be impossible. Everyone who has been to some extent engaged in the investigation of miliary foci of softening knows that secondary degenerations may proceed from each one of them. The account of the finding of degenerated fibres (and cells) in area No. 34 (?) given by von Monakow says nothing as to the origin of these fibres. In like manner a case recently described by Proft (discovery of Marchi's strata in all three frontal convolutions, &c., in a case of hæmorrhage in the thalamus) is so ambiguous that it cannot serve as a proof of the presence of a corona radiata in area No. 35. For instance, in it both pyramids showed degeneration. If Proft's interpretation is accepted it would therefore have also to be inferred from this observation that both pyramids of the medulla oblongata are in relation with the thalamus opticus of the right side—a thing which is most improbable.

In the present state of knowledge on the subject of secondary degenerations I think that it is extremely unscientific to attempt to infer that "the pathological method" has absolutely proved that all the convolutions of the cerebrum are equally provided with a corona radiata. In conclusion I ask, Why is there no doubt as to the central convolutions and the visual sphere possessing an exceedingly effective corona radiata? Why cannot it be demonstrated in the terminal zones?

III.

Clinical observations of the symptoms produced by lesions of various cortical areas give results which agree very satisfactorily with those obtained by a study of the developmental conditions of those areas. Disorders of the motor and sensory functions are observed only in lesions of the primordial zones. The motor zone delimited by Charcot coincides with area No. 1; the zone defined by Henschen (the most reliable worker in this field), lesions of which always interfere with vision, coincides with No. 4, and so on. Of localised symptoms which occur in lesions of the intermediary and terminal zones the only known forms are some that involve (1) interference with speech (alexia, optic aphasia, sensory amnesic aphasia, &c.), and (2) partial amnesia (optic, for example). The time to localise these symptoms more definitely has not yet arrived. The question will ultimately reduce itself to this—whether the structures concerned in these obviously preponderating association disorders are the intermediary and terminal cortical zones (i.e., their ganglion cells), or are only deep-seated association systems (i.e., nerve-fibres), as Wernicke and others suppose. I consider it, however, to be extremely unsettled, and it will be impossible to come to a satisfactory decision without a more intimate acquaintance with the whole mechanism of association—namely, of the nerve-fibres and the connexions which they form between the different areas.

From my observations on the child I am led to believe that the opinions which have hitherto been held regarding this mechanism are erroneous, at least so far as concerns the so-called long association system. The fibræ arcuatæ which unite every two neighbouring convolutions are found between all the areas which immediately adjoin one another. Areas which lie further apart are united by long tracts, and it is to be observed that their anatomy is as yet incomplete in the highest degree. All the areas with long tracts are by no means in effective connexion. The areas differ with respect to the corona radiata and they also differ in a most extraordinary manner with respect to the long association systems. The terminal zones are the richest in them; they are the endings of the long association systems. On the other hand, no long association system is known which connects two primordial zones that are to be regarded as sensory centres. The fasciculus longitudinalis inferior, which is always quoted as an example of this, is in actual fact a projection system, the real optic radiation, the line of transmission of optic stimuli from the external corpus geniculatum to the visual centre in the cortex, and this can be demonstrated in the newly-born so conclusively that all objections to it must fail. If a visual and an auditory impression meet one another anywhere in the cortex of the cerebrum, this can only happen through the instrumentality of the intermediary and terminal zones. If the mutual interference of the stimuli is a preliminary condition of the association of their mnemonic impressions, the cortex of the intermediary and the terminal zones will be indispensable for this purpose also. They are therefore association centres; and this view is strongly confirmed by the clinical observation that in lesions of the region lying between the visual and tactile spheres it is association troubles that occur, the best known of which is sensory alexia.

The objections which have been raised against these views on the grounds of comparative anatomy, experimental observation, and the study of the successive phases of development are not very weighty. If the development of the medullary substance is studied in the lower animals it must not be forgotten that they are without exception much less favourable for the purpose than the human subject is. Here it is a fact of primary importance that in the lower animals the process passes through its stages much more quickly than in man—in the cat, for instance, in about one-fifth of the time. All the phases of the development are brought much closer together. The number of the areas in the cortex is considerably less (in the dog Dr. Döllken could hardly reckon 20), and the size of the areas of late development is much greater in the human subject than in the lower mammals, so that in the human subject not only do all the points of difference continue unchanged over far larger spaces of time, but they also take much clearer and more distinct shape. The fundamental laws of development come better into view in the human subject, in like manner to the degree in which the human intellect excels that of the lower animals.

ON THE PROTECTIVE SUBSTANCES OF IMMUNE SERA.

BY E. W. AINLEY WALKER, M.A., M.D. OXON.,
RADCLIFFE TRAVELLING FELLOW, UNIVERSITY OF OXFORD.

(From the Bacteriological Institute of Berne and the Pathological Laboratory of the University of Oxford.)

PRELIMINARY COMMUNICATION.

THE experiments on which the following arguments are based were made originally in the Bacteriological Institute at Berne during the early months of the present year.

1. If the M. L. D. (minimum lethal dose) of a given bacterial culture be determined and the dose of immune serum necessary to protect against this M. L. D. be called its serum equivalent, it has been observed that if an animal be now given two M. L. D. and two serum equivalents it is not protected but dies from the infection. This has been explained as due to a deficiency of addiment in the animal concerned, but in reality it is only due to a deficiency in the amount of immune body given in the immune serum.

For if d be the M. L. D. and e the largest dose of the bacterium found not fatal, s the dose of serum necessary for protection in the first experiment with one M. L. D., it follows that since the animal can itself protect against a dose of e the serum s was protecting only against $(d-e)$ of the bacterium when one M. L. D. was given. When, therefore, we proceed to give two M. L. D. we require serum protection against a dose of $2d-e$ and this requires $\frac{2d-e}{d-e}s$ of the serum. Similarly three M. L. D. require $\frac{3d-e}{d-e}s$ serum and four M. L. D. require $\frac{4d-e}{d-e}s$ serum. Experimentally, if serum be given according to this formula the animals are found with the bacillus used—the bacillus typhosus—to be completely protected up to and including the fourth M. L. D., and only after this point is passed does a deficiency of addiment appear, as may be seen below, where the serum-equivalent of one M. L. D. is called the serum unit, d being 0·075 of a given culture, e 0·05 of the same culture, and s 0·025 cubic centimetre of immune serum per 100 grammes of guinea-pig.

Guinea-pig	1, given	1	M.L.D. and	1	serum unit;	recovered.
,,	2, ,,	1	,,	1½	,, ,,	died in 16–18 hours.
,,	3, ,,	2	,,	4	,, units;	recovered.
,,	4, ,,	2	,,	3	,, ,,	died in 18 hours.
,,	5, ,,	3	,,	7	,, ,,	recovered.
,,	6, ,,	3	,,	6	,, ,,	died in 14–16 hours.
,,	7, ,,	4	,,	10	,, ,,	recovered.
,,	8, ,,	4	,,	9	,, ,,	died in 18–20 hours.
,,	9, ,,	5	,,	13	,, ,,	died in 14 hours.
,,	10, ,,	5	,,	12	,, ,,	,, ,,
,,	11, ,,	6	,,	16	,, ,,	,, ,,
,,	12, ,,	6	,,	15	,, ,,	,, ,,

In another series of experiments made in Oxford with a more virulent variety of the bacillus typhosus the deficiency of addiment appeared at the fourth M. L. D. In working with the immune sera it is therefore necessary to employ the formula above arrived at in order to determine accurately the amount of serum which contains the quantity of immune body required for any given multiple of the M. L. D. of the bacterium concerned.

2. On the observed deficiency of addiment in experiments with multiples of the M. L. D. of a bacterium Professor Ehrlich founds a theory of the specialism of the addiment to the species of animal in question. He holds than an animal can only make use of its own addiment or of that of others of its own species, and hence endeavours to explain the fact that immune serum does not supply the lack of addiment observed. But this view is out of harmony with the experimental facts. Thus Wassermann found the addiment of fresh ox serum satisfactory to guinea-pigs and to the immune serum of dogs which was used for their protection. Ehrlich and Morgenroth have observed similar relations in their work upon the hæmolysins. The following experiments further show that the deficiency of addiment can be supplied for guinea-pigs treated against typhoid fever with immune serum of the horse by the fresh serum of the ox, the rabbit, and the pig:—

No. of guinea-pig.	Received			Result.
	M.L.D.	Serum units.	Fresh serum.	
1	10	28	—	Died within 16 hours.
2	,,	,,	Rabbit's, 1 c.c.	,, ,, ,,
3	,,	,,	,, 2 c.c.	Recovered.
4	,,	,,	Ox's, 1 c.c.	Died in from 20 to 24 hours.
5	,,	,,	,, 2 c.c.	Recovered.
6	,,	,,	Pig's, 1 c.c.	Died in from 26 to 29 hours.
7	,,	,,	,, 2 c.c.	Recovered.

Hence freshly won serum of the three different animals examined can supply the lacking addiment for guinea-pigs. The same may probably be true of other normal sera. I therefore claim that addiment is not so special to the species as Professor Ehrlich thought.

But if the sera of these animals were kept for a few days in the ice-chest they were found to lose their power of addimentary action; that is to say, their addiment disappeared and guinea-pigs which received the same and even much larger doses of the normal sera than in the above experiments were no longer protected. Further, the addiment of the fresh-won sera was found to be destroyed by their exposure to a temperature of 53° C. during an hour. On both these grounds it follows that the addiment of the bacteriolytic action here in question is extremely labile, being destroyed by a temperature of 53° C. and disappearing naturally from separated serum with considerable rapidity. And I conclude, that the reason why immune serum which supplies immune body fails to yield addiment to the infected animal is that the latter, owing to its extreme lability, is altogether absent from stored immune serum, and not that owing to its specialism it is unavailable by a species different from that of the animal which supplies the immune serum.

3. Coming next to the question of what addiment consists we have the following facts. Anti-microbic sera have *in vitro* no bacteriolytic action—they contain immune body but addiment is absent. They may be rendered active by cellular action, as, for example, by a sojourn in the peritoneal cavity of a guinea-pig. The activity thus obtained is destroyed by heating to 56° C.—destruction of addiment. It is restored by the addition of normal serum (Bordet) or of leucocytic fluids (Hahn). Moreover, an inactive immune serum which has not been subjected to the action of the peritoneal surroundings can similarly be rendered active by the addition of leucocytic fluids (Bordet's phenomenon) and a definite relation exists between the mass of the leucocytes added and the degree of bactericidal power obtained (Bordet). Again, a bacteriolytic pleural exudate has been made entirely inactive by the removal of its leucocytes, active again on their replacement (Denys and Havet). Further, it has been shown above that addiment is present in fresh normal sera from which it disappears on heating to a temperature of 53° C., or simply by keeping, and it was also found to be obtainable in other experiments from the fresh blood-clot of the animals already mentioned. It follows that the addimentary ferment is definitely associated with the leucocytes and is not a ferment circulating freely in the blood-plasma, as Ehrlich teaches. The leucocytes possess addiment even *in vitro* and can supply it to a serum from which it was previously altogether absent; and the addiment contained in the fresh sera is merely such as is set free by the destruction and breaking up of leucocytes.

4. It has been stated by von Dungern that the addiment is not increased in quantity during immunisation. If this were so it would imply that the newly-formed leucocytes of the leucocytosis, which admittedly occurs, are deficient in their characteristic and essential ferment; and this is almost inconceivable. Moreover, if new addiment is not formed it should be found impossible to immunise an animal to withstand a larger dose of the infective agent than that number of M. L. D. at which deficiency of addiment appears in unimmunised animals—e.g., in these experiments four M. L. D. of bacillus typhosus; and this is evidently not the case. Experiments, however, have shown that long after deficiency of addiment has become evident it remains possible, by giving

a large excess of immune body (immune serum), to protect the infected animals which thus have time allowed for the formation of fresh addiment by the provision of excess of immune body which enables the new addiment produced to deal with the bacterial multiplication occurring in the interval. Thus, though deficiency of addiment was evident at five M. L. D., and the immune serum contains no addiment at all, yet it was possible by an excess of serum to protect against 10 M. L. D. The addiment, therefore, undergoes increase during immunisation.

5. The immune body is formed by leucocytes. For let that atom-group of the bacterium which is taken up by cell-receptors in the animal and thus excites the formation and splitting off of immune body be spoken of as the I-group of the bacterium. Then the corresponding receptor must be present in the leucocytes, for thus only can be explained the destruction of bacteria in the naturally immune since the plasma of such animals contains no immune body. On the injection of bacteria in immunisation these receptors will give rise under the stimulating influence of the I-groups to a formation of the immune body by their proliferation and splitting off into the plasma. But even if suitable receptors for the I-groups were present in other tissues besides the leucocytes and could similarly give rise to the formation of an anti-body to these groups of the bacteria, this would not constitute true immune body. For the latter is supplied not only with an I-group haptophose, but also with an addimentophil haptophose, while the hypothetical anti-body formed in other than the leucocytic tissues having no necessary relation to the addiment could only by an extreme coincidence possess a haptophose attractive to the leucocytic ferment. This difficulty did not appear so long as we could hold with Ehrlich that the addiment was a general metabolic ferment circulating freely in the plasma and possessing a necessary relationship to metabolic cell receptors generally. But I have urged that this is not the case. And, further, there has recently been proved to exist a definite parallelism between the increase of immune body and the increase of certain forms of leucocytes during immunisation, while the experiments of Deutsch and others point definitely to the formation of the protective substances in the leucocytic tissues.

6. Agglutinins have been shown to bear a close relation to protection. What is the nature of this relation? In anti-microbic sera we have at least two functions—namely, (1) bacteriolytic and (2) antitoxic, against intracellular bacterial toxins set free by the bacteriolysis. Such antitoxic action we have found by experiment to exist in the antityphoid serum here in question. Agglutination can have no relation to this antitoxic action against intracellular toxins, for it occurs equally with living as with dead bacteria. Its relation to protection must therefore be a relation to bacteriolysis. But it is not concerned in lysogenesis, which is a function of the action of immune body to addiment alone; for agglutinins cannot actually be the immune body, as supposed by Grüber, since they are formed in the lung tissue (Deutsch and more recently Moreschi also), while immune body is a product of the leucocytes. Hence it is probably in relation with the only other factor in bacteriolysis—namely, the phagocytic process, which is evidently assisted by the faculty possessed by the agglutinins of bringing the bacteria together in larger or smaller masses and at rest and by the change which they induce in the bacterial envelope. And I suggest that just as in the final and essential stage of the destruction of bacteria the chemical digestive action of the addiment of the protective cell is aided by a chemical change produced in the bacterial substance by the immune body, so in the preliminary or phagocytic stage the physical process of ingestion is aided by the physical alteration induced in the bacteria and their activity by the agglutinins.

Conclusions.—1. Addiment is not extremely special to the species. 2. Addiment is a leucocytic ferment. 3. Addiment is increased during and by immunisation. 4. The immune body is produced exclusively by the leucocytes. 5. Agglutinins assist the phagocytic process.

Oxford.

GYNÆCOLOGICAL CASES.[1]

BY H. MACNAUGHTON-JONES, M.D., M.CH. R.U.I., F.R.C.S. IREL.

DR. MACNAUGHTON-JONES, on exhibiting the cases, said:—*Primary tuberculosis of the Fallopian tube with pyo-salpinx.*—These appendages were removed from a patient, aged 22 years. She had been married for two and a half years at the time of the operation and had completed her first pregnancy at the end of the first year of her married life. She was brought to me by Dr. H. Disney in January, 1901. She then complained of considerable and constant pain in the left side, with inability to walk, and dyspareunia. The catamenia had been regular and normal. On examination I found the adnexa on the left side to be much enlarged, softened, and very sensitive. The right were not enlarged, but I could distinctly feel adhesions. I advised immediate operation, either exploration by colpotomy or abdominal cœliotomy, the affected adnexa to be dealt with either by removal or resection according to circumstances. This was practically agreed to, but by the advice of a distinguished obstetric physician who saw her immediately after I did operation was declined and the hope was expressed by him that by rest and a course at Woodhall Spa none would be required. I did not see the patient again until the day before I operated on her. This was on July 10th, 1901. Pain had then been for some time agonising, and she herself demanded operation. The condition of the right adnexa can be judged from the specimen (Fig. 1).

FIG. 1.

Primary tuberculous pyo-salpinx. (Sac opened.)

The Fallopian tube was distended with pus, forming a long crescentic swelling one and a half inches in diameter at its widest part, the surface of the tube being adherent. The right ovary, though fixed by some adhesions, was healthy. A large cavity filled with serous fluid (perimetric cystoma) had formed behind the meso-salpinx and between the

[1] A paper read before the British Gynæcological Society on Oct. 10th 1901.

distended tube, the ovary, and the adjacent viscera." The following is the conclusion of Mr. J. H. Targett's report on the specimen: "The external surface of the specimen is covered with thin fibrous adhesions in which many miliary tubercles are embedded. The lumen of the tube is filled with thick caseous pus and the inner surface is shaggy from ulceration of the mucous membrane. There is very little thickening of the wall of the tube anywhere and in some parts it is much thinned by distension and ulceration. Microscopical sections of the undilated uterine end of the tube exhibit general thickening of the mucous membrane and infiltration with miliary tubercles. The epithelial lining is for the most part intact."

This is the second case I have had of primary tuberculosis of the Fallopian tube in a young woman otherwise in perfect health, and with no family history of tuberculous disease. The first which I have reported in full elsewhere[2] was complicated with hæmato-salpinx. The particulars of the last case speak for themselves. The patient made an uninterrupted recovery.

Large hernia following on cœliotomy operations.—This was the largest post-operative hernia I have ever seen. The drawing, which was taken from a photograph, gives a fairly good idea of its extent. When I saw the patient in May of the present year the bowel was down in a large sac which protruded over the pubes, where there was a more defined pouch, covered only by the integument (Fig. 2). A

FIG. 2.

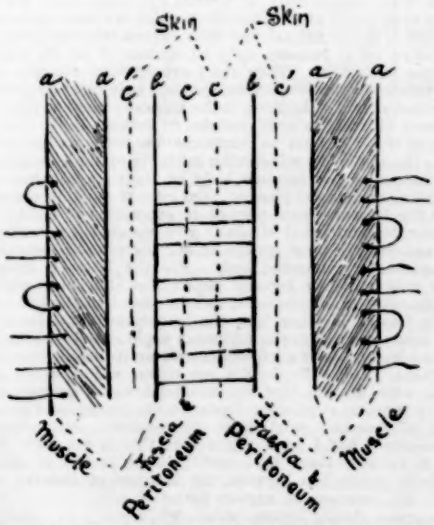
Before operation. (From photograph.)

large space of several inches separated the recti muscles and fascia. The bowel appeared to be adherent in parts to the parietal covering. The patient was subject to recurrent attacks of severe pain and had to be confined to bed for several weeks before operation. This was due to attacks of subacute peritonitis. The old cicatrix extended from a short distance below the umbilicus to about two inches above the pubes. Cœliotomy had been twice performed. I did not learn until the day of the operation that the abdominal wound had been closed after the last operation without sutures, the parts having been brought together by adhesive plaster. I determined to perform the following operation. The steps may be understood by the accompanying diagram (Fig. 3). Having carefully incised the skin (*c c*) in the middle line over the cicatrix by a cautious dissection vertical to the bowel, which was immediately subjacent and in parts adherent, it was reflected back to the extent of some three inches at either side (*c'*). Some dense fascia (*b*) was then exposed continuously with the peritoneum and the fascia of the rectus (*a a*). This fascia also was raised and reflected back, the dissection including a portion of the rectus sheaths (*a a*). All bleeding points from adhesions of the bowel were secured. The whole omentum and bowel were then covered with a sterilised napkin wrung out of warm formalin solution. Mattress sutures were then carried

[2] Diseases of Women, eighth edition, p. 622.

from side to side in the following manner. Two straight ovariotomy needles, each threaded with fairly strong silver wire, were passed parallel from the outer border of the rectus including the fascia, across, and passing under the dissected fascia were brought out at corresponding points on the opposite side. Six of these were carried alternately in the manner shown in the drawing, and a single strong wire was passed at the upper and lower angles of the wound. The

FIG. 3.



central ones were separated, and the napkin was caught in the centre and readily withdrawn between the sutures. These were then tightened, and the ends, twisted and cut close, were buried in the rectus muscle at either side. This brought into apposition a line of rectal fascia with the muscle and the underlying peritoneum, leaving a raised flap of fascia which projected at either side for the entire length of the incision. This was pared and made to overlap, and then closed with silkworm-gut sutures, which were cut short. The skin margins were then united. There was no trouble whatever after the operation, which the patient bore remarkably well, and she has since left this country on a long voyage.

Very large fibromyoma; hysterectomy; recovery.—The patient from whom this tumour was removed was a multipara, aged 50 years. Her last pregnancy was in 1890. She had never suffered any particular pain, and could not date the commencement of the growth. She noticed an enlargement some two years since, but only within the last few months had there been a rapid increase in size. The periods had been irregular in occurrence and quantity, and there was a considerable loss a few days before operation. On examination a large moveable abdominal tumour was found, semi-solid to the touch, and associated with the uterus, the cavity of which was over five inches in length. The abdomen was enlarged much beyond the size of that of the full term of pregnancy. I operated on Sept. 12th, the patient having a full knowledge of the dangers connected with the operation. The enormous tumour was found to be free from adhesions, and was delivered through an incision reaching from below the ensiform cartilage to the pubes. A broad pedicle attached it to the left broad ligament and there was a separate attachment to the uterus. The capsule having been completely detached by a circular incision and stripped down the attachment to the uterus was secured and supra-vaginal hysterectomy completed. The large broad ligament pedicle was then ligatured in segments and the tumour was detached. After removal it was found that the bladder had been opened. The wound was closed by catgut sutures and a catheter was retained. The operation lasted altogether for two hours and during the last half-hour subcutaneous (sub-mammary) injections of artificial serum were maintained. The anæsthetic given was chloroform. There was dangerous collapse on the delivery of the tumour and

again towards the close of the operation. As there was some bleeding from the bladder it was washed out at intervals with a solution containing 30 minims of liquid extract of suprarenal capsule. The tumour proved to be a solid fibromyoma and it weighed 28½ pounds. Its size and shape can be estimated from the accompanying illustrations taken from photographs (Figs. 4 and 5). The table on

FIG. 4.

FIG. 5.

which the tumour rests measures 16 by 16 inches. (The uterus and adnexa are not shown.) So far, with the exception of some cystitis and pus in the urine, the patient has made an excellent recovery.

Harley-street, W.

THE PREVENTION OF ASPHYXIA WHEN THE BIRTH OF THE AFTER-COMING HEAD IS DELAYED:

A HISTORICAL NOTE.

BY G. F. BLACKER, M.D. LOND., F.R.C.S. ENG.,

OBSTETRIC PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL AND TO THE GREAT NORTHERN CENTRAL HOSPITAL.

THE danger of asphyxia to the child in cases of breech presentation where the birth of the head is delayed is always great, and with a view to obviating the risk numerous means have been devised of delivering the after-coming head with the maximum of rapidity and the minimum of danger to both mother and child. In many instances, however, even under the most skilful treatment the child is born asphyxiated and life cannot be restored, and the management of such a case is always a matter of grave anxiety to the medical practitioner. By a curious coincidence in THE LANCET of Sept. 21st Dr. Edwin Smith writes (p. 815) advocating the use of a catheter passed into the child's mouth in those cases where there is danger of asphyxia, and in the same issue of THE LANCET Mr. G. W. Ord describes (p. 790) how 12 years ago he saved the life of an infant when the head was delayed in the vagina by passing a silver male catheter into the mouth and so enabling air to enter the lungs. Dr. Smith takes the precaution—a wise one at the present day—of apologising in advance to the gentleman who may write to say that he described the device many years ago. I am afraid, however, that this particular practitioner is far beyond the power of writing letters to the medical journals. The originator of this method of avoiding asphyxia to the child in cases of breech presentation would appear to have been Benjamin Pugh of Chelmsford who, in his Treatise on Midwifery published in 1754, p. 49, in discussing the treatment of such presentations, writes:—

> When the Parts are well made, and the Child in proportion, happy the Case! it will come then any Way, the Arm being brought down, the Head only remains to be extracted, which must be done with as much Expedition as possible, as indeed the Arms ought to be; for consider when the Child has passed the Navel, the Circulation between it and the Mother is stopp'd from the Pressure of the umbilical Rope; you must then introduce the Fingers of your Left-hand into the *Vagina* under the Child's Breast, and put the first and second Fingers into the Child's Mouth pretty far, so far, however, that you are able to press down the Child's Tongue in such a Manner that by keeping your Hand hollow, and pressing it upon the Mother's *Rectum* the Air may have access to the *Larinx*, you will soon perceive the *Thorax* expand as the Air gets into the Lungs. Many Authors make very little Trouble in extracting the Head, but without a well formed *Pelvis* every Operator must know there is Difficulty, and great Danger of losing the Child by its Stay in the Passage; but by this Method of giving the Child Air, I have saved great Numbers of Children's Lives which otherwise must have died. And now you may rest yourself a little, which you have great Need of sometimes. If the Child does not breathe immediately upon Delivery, which sometimes it will not, especially if it has taken Air in the Womb; wipe its Mouth, and press your Mouth to the Child's, at the same time pinching the Nose with your Thumb and Finger to prevent the Air escaping; inflate the Lungs rubbing it before the Fire: by which Method I have saved many. Before I made use of this Method and pressing externally, to assist in Extracting the Head, I found many Children were lost in this Situation, for want of Air, which put me upon both Inventions, as likewise a third, which was a curve flattish Pipe, as likewise a flexible one, that I introduced into the Child's Mouth, as near to the Larinx as I could the other End external, which I found answer; but now as I find my Fingers will generally answer I seldom make use of it.

In the plates appended to this work is figured the tube (Fig. 1) which Pugh was in the habit of using. It is described as follows:—

> The Air-Pipe as big as a Swan's Quill in the Inside, ten Inches long, is made of a small common Wire, turned very close (in the Manner Wire Springs are made) will turn any Way; and covered with thin soft Leather, one End is introduced up the Palm of the Hand, and between the Fingers that are in the Child's Mouth, as far as the *Larynx*, the other End External.

The next reference of importance to be found relating to this ingenious method is in a little book entitled "Essai sur les Accouchemens contre Nature ou Méthode Assurée de Déliverer les Femmes, par Pierre-Etienne Morlanne," published at Metz in the year 1802. In describing the method of making jaw traction in breech presentations the author says: "After having seized the chin the surgeon places one or two fingers in the mouth of the child, depresses the tongue, and facilitates by this procedure the introduction of air into the chest. This operation with which a frequent use in preternatural confinements has rendered me familiar, should take its place as a fundamental principle of the art which aims at preserving the life of the child. I have seen in labour rendered difficult by the size of the head or the smallness of the pelvis—I have seen, I say, the child live for more than half an hour by the admission of air into the bronchi, and ultimately survive the difficulties of its extraction when one has employed the proper means to revive it."

In 1829 Dr. Jacob Bigelow, at that time professor of materia medica at the University of Harvard, published a paper in the *American Journal of the Medical Sciences*[1] on the Means of Affording Respiration to Children in Reversed Presentation. He draws attention to the fact that not uncommonly while the practitioner is making efforts to extract the after-coming head there occurs a convulsive jerk or spring of the child which indicates that a state of extreme danger exists and that the time has come at which the child must breathe or will speedily die. He recommends that when the head is low down the accoucheur "should introduce the hand to which the face of the child looks till the middle fingers rest upon the mouth of the child.

[1] Vol. iv., p. 285.

The hand is then to be raised from the throat of the child, making the ends of the fingers a fulcrum and pushing the perineum backwards. The air will thus pass upwards as far as the chin of the child. The middle fingers are now to be separated about half an inch from one another, and thus a complete passage will be formed between them by which the air will reach the mouth of the child. If the child be in a healthy state it will immediately breathe and cry and the delivery of the head may be safely postponed until the natural pains recur. If from any degree of asphyxia the child does not immediately breathe it may often be made to do so by dashing cold water upon the body or by other stimulating processes. When the head is so

FIG. 1.

Pugh's tube, from the original engraving.

high in the pelvis as to be reached with difficulty a flat tube will be found useful, made of metal, of spiral wire covered with leather, or of elastic gum, and having its largest diameter about half an inch. Such a tube may be considered as a prolongation of the trachea, and is fully sufficient to sustain life by respiration for a considerable time." He considers Pugh's advice to depress the tongue as superfluous, since it is sufficient to make a passage for the air as far as the child's lips only. Five cases are recorded in which by the use of one or other of these methods the child was enabled to breathe with its head still in the vagina. In each of the cases the life of the child was saved, while in two of them the infant cried quite plainly before the delivery of the head was completed. Professor Bigelow was acquainted with Pugh's book, and he quotes his practice. As he points out, however, after 1754 this method seems to have been lost sight of, and no mention of it is to be found in the works of Smellie, Denman, Hamilton, and Burn, nor have I been able to find any allusion to it in Levret, Johnson, Rigby, Ryan, Blundell, Ramsbotham, or Meadows. In most of the text-books published about the middle of the last century after the publication of Bigelow's paper the practice is alluded to, as, for instance, in the treatises of Meigs, Tyler Smith, and Churchill.

FIG. 2.

Joos's tube, from the original engraving.

Simpson in his paper on Turning as a Substitute for Craniotomy presented to his pupils in 1850, in discussing the mortality to the children and the means by which the effects of compression of the cord may be averted, alludes to the works of Pugh and Morlanne, and quotes two cases (Case 60, p. 135, and Case 62, p. 136) recorded by Dr. Lee in his "Clinical Midwifery" (second edition, published in 1848) in which by forcible retraction of the perineum the child was enabled to breathe in one case for 20 minutes and in the other case for nearly half an hour after the pulsation in the cords had entirely ceased. In both instances the children were born alive and they survived, and in one the perineum was uninjured.

Barnes, in his Lectures on Obstetric Operations,[1] states that he has kept a child alive for 10 minutes in a case of breech presentation by holding back the perineum and so enabling air to enter the chest.

In the *London Medical Gazette* of Oct. 22nd, 1847, p. 720, Dr. Joos of Schaffhausen described a very ingenious instrument by which he proposed to prevent compression of the cord and so avoid the danger of asphyxia in pelvic and other presentations. This device (Fig. 2) consists of a tube from four to eight inches in length and of a diameter sufficient to contain the umbilical cord. It has a slit equal to one-twelfth of its circumference along one side. The tube is made of caoutchouc or leather, with a series of steel rings three lines broad inserted into it at a distance of one line apart. By the insertion of a finger into the slit the tube is opened up to admit the cord into its interior, and as the steel rings are sufficiently strong to prevent its compression, by placing the tube, or if necessary two such tubes, inclosing the cord between the child's head and the pelvis all danger of interference with the placental circulation by pressure is avoided. "The application of the instrument," says Dr. Joos, "may take place during the act of birth by presentation of the breech or feet and in cases in which a fatal pressure upon the cord is to be feared." The use of such a tube or tubes would be practically impossible in the majority of cases and there is no evidence forthcoming that even its inventor ever put it to the test of actual employment.

Hardly any of the writers of modern text-books on obstetric medicine refer to Pugh's method of overcoming the danger from asphyxia when the birth of the after-coming head is delayed, and in this omission they no doubt exercise a wise discretion. The passage of a catheter or special tube into the child's mouth when the head is lying high up in the pelvic cavity is only likely to lead to a waste of valuable time, while if the head is sufficiently low down in the pelvis to admit of air reaching the mouth if the perineum be retracted its immediate extraction should be a matter of little difficulty. It is instructive to note that in three of Dr. Bigelow's cases the head was born spontaneously, while in one of them it was easily extracted by the use of forceps after an attempt to set up respiration by passing a tube into the child's mouth had failed.

The instances recorded by various observers show that in cases of extreme emergency it is possible to keep a child alive by the use of one or other of the methods described for a considerable length of time. At the present day, however, when our means of delivering the after-coming head either by combined shoulder and jaw traction, or, better still, by the application of forceps, are so certain it becomes a question whether it is not better practice to extract the head at once even at the risk of a bad tear of the perineum rather than to attempt to initiate the act of respiration while the head is still within the vagina. The warning of Barnes should not be forgotten. Speaking of Pugh's device he says: "I must warn you not to trust to these or similar plans, lest the golden opportunity be irretrievably lost. The real problem is to get the head out of the pelvis," and to this advice one may safely add the qualification, *as rapidly as possible*.

Wimpole-street, W.

[1] Third edition, 1876, p. 211.

THE TREATMENT OF HEMIPLEGIA.[1]

BY LEONARD G. GUTHRIE, M.A., M.D. OXON., F.R.C.P. LOND.,
PHYSICIAN TO THE HOSPITAL FOR EPILEPSY AND PARALYSIS, REGENT'S PARK; SENIOR PHYSICIAN TO THE PADDINGTON-GREEN CHILDREN'S HOSPITAL.

I HAVE chosen for the subject of this paper the treatment of hemiplegia because in my experience many patients suffering from this disease are not treated at all. Doubtless they receive plenty of iodide of potassium, strychnine, and other drugs, their natural wants are attended to, they are put in and out of bed, cleaned, clothed, and fed like babies, and on bright days they may be taken out in bath-chairs or they may be allowed to sit in the sun like Old Caspar "when his work was done"; but so far as their paralysis is concerned they are too often left to themselves. The blame for this neglect rests partly on the public. Paralysis to the public means incurability; a rooted conviction prevails that a person who has had one stroke of paralysis is bound to have another, and yet a third which will be infallibly fatal. Medical attendance is therefore discouraged as useless and the medical attendant soon receives a more or less polite intimation that his visits need not be continued and that he will be "sent for if wanted"—that is to say, should the patient have another stroke and appear at death's door. Neglect of hemiplegic patients may also be attributed to the pessimistic and cynical teaching that those who get well do so without treatment and those who do not get well derive no benefit from treatment. Neither statement is strictly true. Mild cases may never recover unless treated, and severe cases, unless treated, may go from bad to worse.

Before discussing methods of treatment it is necessary to describe the conditions with which we may have to deal and which we hope to combat.

In a severe case of hemiplegia of from six months' to twelve months' duration or longer the patient's arm and leg may be quite useless and immobile. He is unable to stand or walk. His joints are fixed and any attempt to move them causes extreme pain; his shoulder is usually adducted to his side, his elbow and wrist are flexed, his forearm is pronated, and his fingers and thumb are doubled into the palm of his hand. His hip and knee may also be flexed, his thigh adducted, his knee and foot inverted, and his heel drawn up. The muscles are all wasted and some are shortened and contracted, thus causing the characteristic pose of the limbs, which cannot be overcome, and his reflexes are exaggerated. This is the extreme and incurable state of helplessness at which the sufferer from hemiplegia may arrive. The immobility of the limbs is due (1) to articular adhesions; (2) to motor paralysis leading to muscular atrophy; and (3) to spasticity or spasmodic contraction of muscles leading to permanent shortening of the stronger ones. These conditions in an advanced stage are incurable, but I submit that systematic and intelligent treatment from the first would lessen the number of incurable patients and would alleviate the lot of those not cured.

The methods of treatment at our disposal are—(1) passive movements; (2) massage and electricity; (3) re-education of movements by passive and active exercises combined; and (4) mechano-therapeutics.

Articular adhesions frequently cause limitations of movements. They may occur in the elbow, the wrist, the hip, the knee, and the ankle-joints, but are most common and are formed earliest in the shoulder, rendering movements of the joint painful if not impossible. A limb which might have recovered is often useless owing to their presence. Some regard adhesions as trophic, others as rheumatic, in origin. In advanced cases changes indistinguishable from those of rheumatoid arthritis may be induced, especially in patients who already have signs of that disease. The nerves in the neighbourhood of the joints may be involved and may give rise to the painful symptoms of peripheral neuritis. Whatever be their cause, in most cases adhesions are preventable. Unfortunately, it happens too often that in early days of hemiplegia a dread is entertained lest any disturbance of the patient should cause further hæmorrhage or other mischief in the brain. So he is left to cuddle and caress his paralysed arm to his heart's content. He usually hugs it to his side and flexes his elbow and forearm across his chest in the very position which it is desirable to avoid. This fear of moving the limbs is quite unfounded. Gentle passive movements of each joint should be practised many times a day from the very first; for adhesions begin to form very early in the first week or two, during which it is advisable to confine the patient to bed. When formed they are difficult to disperse, hence the importance of preventing their occurrence or dealing with them early. Neglected adhesions soon become permanent.

Spasticity or early rigidity is noticed on manipulation of the affected limbs or by the patient's voluntary movements of other parts. Any lesion affecting the cerebral motor tract may give rise to it. Some attribute it to "unantagonised cerebellar influence," others to irritation of the fibres of the tract by the lesion. In late stages it is doubtless due to descending sclerosis of the antero-lateral columns. The muscles chiefly and usually affected are the adductors of the shoulder, the flexors of the elbow, the pronators of the forearm, the flexors of the fingers and the thumb, and the adductors and the opponens muscles of the thumb. In the lower extremity the adductors (rarely the flexors) of the hip, the hamstrings, the plantar flexors, and invertors of the foot are specially involved. Spasticity or early rigidity leads to structural shortening of the muscles chiefly affected, and renders the characteristic pose of the limbs permanent. This condition of late rigidity is practically incurable. The early treatment of this condition is as important as is that for the prevention of articular adhesions. Almost from the first the limbs tend to assume the attitude which may afterwards become permanent. Therefore, even whilst the patient is confined to bed all faulty positions and any tendency to adopt a particular position should be corrected. Adduction of the shoulder may be prevented by placing a sandbag in the axilla. The elbow should be kept extended rather than flexed; the tendency to flexion is easily overcome in early stages. Advantage may be taken of the curious consolation which the patient derives from playing with his paralysed arm by instructing him to alter its position himself from time to time with his sound hand. Faulty positions of the lower extremity should be similarly treated. The limb should be rotated outwards and abducted and the foot dorsiflexed and everted in order to obviate the tendency to assume opposite positions. Spasm of the hip flexors is rare, but when it occurs it may be counteracted by placing a pillow beneath the buttocks. Contraction of the hamstrings should be treated by raising the heel. Sandbags may be used to ensure favourable position of the limbs. When the patient leaves his bed similar precautions should be taken against malposition. He should never be allowed to carry his arm in a sling, but he should keep it dependent as far as possible, only flexing it from time to time should œdema appear. He should not be allowed to sit with his knees and toes turned in, but should be told to correct these positions himself with his sound hand. The principles of treatment so far aim at prevention of fixation of joints and faulty positions of limbs.

Muscular atrophy usually occurs sooner or later in hemiplegic limbs. It is doubtless due to disuse, but it must be remembered that not only muscular but nervous tissues suffer from disuse. Mott[2] and others have shown that the neurons are dependent on stimuli from the periphery for their function and nutrition. Such stimuli are derived from normal movements and alterations in tension of the skin, the muscles, the tendons, the ligaments, &c. Now, the lower motor neurons commencing in the anterior cornual cells are not directly affected by a lesion in the cerebral motor tract, but they may be indirectly or functionally affected by the absence of normal stimuli. Muscular atrophy and paralysis are the prominent features of disease of the anterior cornual cells. Probably, therefore, even when a cerebral lesion has healed recovery from hemiplegia may not take place owing to a functional affection of the lower motor neurons produced by disuse of the limbs. Hence, if normal stimuli are absent, artificial stimuli must take their place. Passive movements, massage, and electricity are such artificial stimuli. By them we may hope to preserve the nutrition of muscles and neurons alike. If we can do so it is obvious that the patient will be better able than otherwise to make

[1] A paper read before the Plaistow and Canning Town Medical Society on Oct. 4th, 1901.

[2] Croonian Lectures on Degeneration of the Neuron, THE LANCET, June 23rd (p. 1779), and 30th (p. 1849), and July 7th (p. 1) and 14th (p. 80), 1900.

use of the gradual return of power expected in most cases of hemiplegia.

Passive movements aid as stimuli, as well as in the prevention of articular adhesions.

Massage.—Massage arrests atrophy, promotes muscular growth, prevents œdema, improves the circulation of blood and lymph, renders the joint supple, and probably has a direct action on nerves and nerve centres; but massage, unless employed with gentleness and intelligence, does more harm than good. It is useless to leave a masseur who has learnt the mysteries of *effleurage, pétrissage, and hachage* in six easy lessons to work his will on the patient. The crude methods of the ordinary shampooer are not applicable to the sufferer from hemiplegia. The man who flays and mauls and thumps his patients, who wrenches instead of coaxing his stiff joints, who tortures him by rubbing the short hairs on his limbs the wrong way, and who digs his horny thumbs below the sufferer's ribs and then remarks complacently, "That's your liver," and does it again in spite of protest, is out of place in the sick-room. Having secured the services of a masseur warranted not to madden the patient by his manipulations we have yet to teach him what to do. It has already been mentioned that spasticity tends to affect certain muscles more than others and that those most affected become contracted and overcome their weaker oponents. Therefore the latter must be strengthened in order that they may hold their own. The simple rule is to massage only the weaker muscles, and their weakness is estimated by the amount of contraction commencing or present in their opponents. The adductors of the shoulder, the flexors of the elbow, the pronators of the forearm, the flexors of the fingers and thumb, and the adductor and opponens muscles of the thumb, are usually, though not invariably, contracted, and should therefore be left alone. The method of massage for improving the tone of individual muscles is *pétrissage*, or "kneading"; *effleurage*, or "stroking," promotes general circulation in the limbs. Kouindjy[1] recommends centrifugal rather than centripetal massage but gives no reason, nor do I know any, for departing from the usual method. Electricity, whether faradaism or galvanism, is a useful adjunct to massage but cannot take its place. If faradaism and galvanism have been discredited in the treatment of hemiplegia I believe it is because so-called "medical electricians" are sometimes over-anxious to give the patient his money's worth. The currents which they employ are often far too strong, their negative electrodes are too small, and they alarm and hurt the patient by sudden makes and breaks. Any current which causes pain or produces muscular contraction is too powerful and may do harm.

Re-education of movements.—So far we have considered the physical causes which impede recovery and the methods of averting adhesions, late rigidity, and muscular atrophy. It must be admitted that in severe cases treatment at best is only palliative. Complete recovery cannot be expected when a part of the cerebral motor tract is absolutely destroyed. Yet we can never tell until time has elapsed the amount of destruction which has occurred. The symptoms of an organic lesion are always widely in excess of its extent. So the prospects may not be so hopeless as they appear. Even in the worst cases a certain amount of improvement may be expected, and its degree will depend on the extent of the damage. We can usually estimate this in a few months' time by the amount of spasticity and atrophy which prevails. Generally speaking, the less the spasticity and wasting the better the prognosis. Motor paralysis is of less grave significance than spasticity.

Occasionally one meets with cases in which, although adhesions, spasticity, and atrophy are slight or even absent, no improvement is manifested. After many months, or even years, the patient remains as helpless as at first. The reason may be that the patient is unaware that any restoration has taken place. He does not try to use the powers which he has unconsciously regained. He is too depressed and disheartened, too apathetic and resigned to his misfortune, or too timid to attempt to help himself. Apart from such mental conditions, which of course need appropriate treatment, he seems literally to have forgotten how to execute voluntary movements. In re-educating him we are helped by knowledge of the natural order in which recovery occurs. Thus, the leg usually recovers before the arm, the hip and knee before the ankle, the shoulder before the elbow, the elbow before the wrist, whilst the extensors of the fingers, and especially the abductors and extensors of the thumb, are the last to be restored. The rule is that the parts whose movements are most specialised and least associated with movements of the opposite limb are the last to regain power. This knowledge is most valuable, for if we can foretell to the patient that power will return in due order in each limb or joint, and he finds the prophecy true in one instance, he will gain confidence in its truth as regards the rest and will persevere in his attempts to anticipate progress. He is less apt to mourn over his useless fingers if able to rejoice over a serviceable leg. Therefore we endeavour to fix his attention on the parts which should be recovering rather than on those which are still obviously paralytic. He has to be content to sit up before he can stand, to stand before he can walk, and to move his shoulder before his elbow, his wrist, and his digits; but he will often be unable to regain any of those powers unless literally taught to do so. The method of teaching is to foresee the dawning approach of power and to elicit it by means of passive movements. It is useless merely to tell such a patient to elevate his arm at the shoulder. He will only sigh, "I cannot." But tell him to do so and at the same time do it for him, and he will gradually learn to raise it himself. At each attempt the operator does less and the patient does more. So the essence of re-education is in the use of passive and active movements combined.

This principle may be applied in the re-education and amplification of all movements. For instance, a patient has learnt to walk but complains that "one foot is always walking into the other and tripping him up." On examination we find that he always sits with his knees and toes turned in. He is unaware of the necessity of practising abduction, rotation outwards, and eversion of the limb, and he is quite unable to execute these movements until taught by passively working the thigh and the foot and encouraging him to make voluntary efforts to do so at the same time. Similarly, although he knows how greatly foot-drop interferes with his walking, he will not try to dorsiflex his foot unless persuaded. He must be taught to make the effort whilst sitting, helping himself meanwhile by putting on a strap attached to the fore part of his foot. Or, again, he has never learned to use his hip flexors. He circumducts his leg or drags it behind him and has difficulty in getting upstairs. We may teach him to flex his hip on the same principles. When some power has been regained it may be improved by making him stand holding the back of a chair and then directing him to place his affected foot on the rungs from the lowest upwards. Kouindjy uses miniature staircases for this purpose.

Mechano-therapeutics, such as weights and pulleys, elastic traction apparatus, &c., are only of use to increase powers already partially regained. The strength of muscles overcome beforehand by contraction of their opponents cannot be improved by increasing their labour.

Disordered association.—The normal *alternate* association of leg movements in walking is often impaired and perverted after hemiplegia. The patient may appear to try to move both legs forward at once. Directly he advances the sound limb the affected one becomes rigid and is dragged painfully behind. To lessen the difficulty he should be taught to advance the unsound leg before the sound, bringing the latter up to the level of the former after each step. He needs to be lightly supported on the paralysed side by an attendant, otherwise he will not rest on the affected leg for fear of falling. It is desirable to prevent a fall, of course, but the support which is given should be moral rather than physical. For this reason the help of an attendant is preferable to that of a stick or crutch. The patient, if able to use either implement, is apt to make it a substitute for his weakened leg instead of an adjuvant.

Ataxy.—Want of precision in movements often follows recovery of both limbs. Exercises on the Frenkel system for the treatment of locomotor ataxy are useful in such cases. Games such as draughts, halma, or solitaires may be recommended, or targets may be constructed on which the patients practise touching the bull's-eye and various circles with the forefinger. In all these exercises the patient "must not hesitate or he is lost." For ataxy of the lower extremity Frenkel's various apparatus may be used whilst the patient is lying in bed. He should also stand supported by the back of a chair and then, resting on his sound leg, place the foot of his weak one into wooden curtain-rings or chalk marks placed in various positions on the floor, touching each in

[1] Archives de Neurologie, vol. x., No. 59.

turn as directed. The pain of neuritis may be relieved by smearing the limbs with equal parts of camphor and chloral hydrate, or glycerine and belladonna, and sometimes mild galvanism is of service.

SUMMARY.

1. Neglect and want of treatment aggravate severe, and retard the recovery of mild, cases.
2. The evils to be foreseen and guarded against are articular adhesions, late rigidity, and muscular atrophy.
3. Articular adhesions should be prevented by passive movements of each joint from the very first.
4. Faulty positions of the limbs should be constantly corrected or they will become chronic.
5. Contraction of muscles should be treated by endeavours to improve the nutrition of their weaker opponents.
6. Massage, passive movements, and to a less extent electricity, should be used with this object. These agents not only counteract muscular atrophy from disuse, but probably take the place of normal stimuli and invigorate the neurons.
7. The recovery of mild cases may be often hastened by re-education of movements. Want of re-education frequently prevents recovery.
8. Re-eduication consists in a combination of passive and active exercises.
9. Movements should be first encouraged in those parts which naturally tend to recover first.
10. Incoördination and general weakness of limbs which have yet regained power of movement should be treated by exercises and mechanical therapeutics.
11. It is important to find out what the patient can do and to make him do it.

In conclusion, this paper deals with the treatment of hemiplegia as a condition without reference to its cause, for whether the cause be hæmorrhage or occlusion of cerebral vessels by embolism or thrombosis is immaterial. The principles of treatment will be the same and need not interfere with other measures taken for the relief of the disease which gave rise to the hemiplegia.

Upper Berkeley-street, W.

THE TREATMENT OF SYPHILIS, WITH SPECIAL REFERENCE TO THE BEST METHODS OF ADMINISTERING MERCURY.

BY WINFIELD AYRES, M.D.,

GENITO-URINARY SURGEON, BELLEVUE HOSPITAL, O.D.P., NEW YORK; INSTRUCTOR IN GENITO-URINARY DISEASES IN NEW YORK UNIVERSITY AND BELLEVUE HOSPITAL MEDICAL COLLEGE; INSTRUCTOR IN GENITO-URINARY DISEASES IN THE NEW YORK POST-GRADUATE HOSPITAL, ETC.

THE use of mercury in the treatment of syphilis, was begun over 400 years ago. For a time the inunctions and fumigations were used so thoroughly that the patient suffered more from the drug than from the disease, and, as a consequence, the school of anti-mercurialists was established. Later, as the uses and evils of mercury were better understood, more and more were converted to a belief in its efficacy until at the present day there are few physicians who do not use mercury in some form. The disease is so insidious and takes so long to eradicate that whatever preparation is selected to deal with it it must be one that is easily borne and will not cause any general disturbance. The method of treatment has long been, and still is, a subject of discussion, the majority claiming that the interrupted method is preferable, while the minority contend that the drug should be given constantly for a period of about three years. As a rule, those who advise the interrupted treatment give the medicine for life, thereby admitting that the disease is incurable. Those, on the other hand, who advocate the constant treatment assert their belief that the disease can be eradicated if the medicine is systematically taken for the prescribed period —namely, three years. It seems to me that this much, at all events, is certain—that there is no hope of eradicating the disease unless the full dose is given constantly for something like the period indicated. In practice the rule should be, first find the point of tolerance and then hold the dosage just below that point. Now arises the question, How soon shall treatment begin? The answer to that question is, Just so soon as the diagnosis of syphilis can be made, whether eruption has appeared or not. The initial lesion of syphilis assumes one of three forms. It is either an ulcerated sclerotic nodule, an eroded sclerotic nodule, or a dry nodule. The diagnosis of chancre can be made safely on the two latter forms, but no man is capable of making a positive diagnosis of chancre on an ulcerative lesion, and in such cases it is better to wait for the secondaries to appear or until the lesion assumes the characteristics of either the dry or the eroded nodule. The next point to be considered is, Does enucleation of the chancre have any effect on the course of the disease? There have been cases reported where no eruption followed enucleation, but it seems to me that in such cases the diagnosis should be questioned. In the majority of cases undoubtedly the eruption follows just as if no enucleation had taken place, and therefore it would seem there is no ground for supposing that enucleation has the effect of aborting the disease.

Some authors urge as an objection to early treatment that if mercury be given before the secondaries appear one can never be certain of the case being syphilis, because the mercury either prevents the eruption from appearing or masks it so that diagnosis cannot be made. If, however, the above rule is followed in regard to the giving of medicine during the chancre stage no question of diagnosis can arise. The advantage of giving mercury during this primary stage is that it either prevents or materially diminishes the eruption, and as a consequence the patient is not disfigured either temporarily or for life, as otherwise he is in danger of being. The effect of the early administration of mercury, in other words, is always to modify the secondaries—that is, they are neither so severe nor so determined; and there is this further advantage that when they do appear the point of tolerance has been established and no time need be lost in determining the dosage.

In passing it may be observed that ulcerating lesions should be treated only locally. If the ulceration is considerable it should be cauterised by some agent that does not destroy the tissue deeply. Saturated solution of potassium permanganate has been of most service in my hands, while a 20 per cent. silver nitrate solution has also been found very efficacious, especially in shallow ulcers. Nitric acid should never be used on an ulcer which is under suspicion, as it will cause too deep a slough and resulting scar. About the best dressing to apply is a piece of cotton soaked in balsam of Peru.

Before leaving the question of diagnosis I may refer briefly to the Justin test, with which I have made very thorough experiments. My experience has been that in all cases of unquestionable syphilis this test responds beautifully, while in all cases of doubtful syphilis the results are invariably negative. Several of the latter cases have proved to be syphilis later. I had 19 cases of chancre tested by this method. All were followed by eruptions, no medicine being given in any of the cases until the eruption appeared. In five out of these cases the test showed a decrease of hæmoglobin, while there was no decrease in the remaining 14. Therefore, I am forced to the conclusion that even in the testing of chancres this method is not of very great service. Later tests are those made by the use of the microscope, the theory being that the existence of syphilis is shown by the presence of three or more crenated blood corpuscles in a particular fluid and by the fact that the blood corpuscles generally do not have a tendency to form rouleaux. This condition, however, occurs in many other cases of secondary anæmia, and therefore this test is of little value except to the expert microscopist.

If a positive diagnosis cannot be made from the appearance of the chancre the patient should be put in first-class condition by means of tonics and the regulation of his diet and habits, special attention being paid to the condition of his digestive organs. And here I may say parenthetically that even when it has been established that a patient has syphilis it is my custom to allow him the moderate use of stimulants if he has been accustomed to them, and this I continue to do all through the treatment of the disease. Tobacco should be barred so long as there are any eruptions in the mouth, but when the eruptions have disappeared the use of tobacco should be allowed, as the irritation it produces will cause the eruptions to reappear if the patient is not getting sufficient mercury, while no harm will result in the event of the dosage being adequate for the control of the disease. Generally

speaking, it is much better for a patient to remain about his business, provided he takes his medicine regularly, than it is for him to be shipped off to any of the springs. The exceptions to this rule are to be found in cases where the disease is so severe as to call for more radical treatment than can be given at home.

This brings us to the question of general treatment. There is practical agreement among the authorities that just so soon as the diagnosis of syphilis can be made the patient should be given some form of mercury, but there is wide diversity of opinion as to which form is best for the purpose, and each surgeon usually selects that from which he has obtained the most favourable results in his individual experience. Only in regard to one other point, besides the necessity of having recourse to the medicine, is there anything approaching a consensus of view, and that is that in order to exercise its anti-syphilitic influence the mercury must circulate in the blood in minutely divided particles, and the assumption is that when chemical combinations of mercury are administered they are broken up in the system into such particles and then absorbed into the circulation.

Of the drugs that are frequently used in the treatment of syphilis I regard blue ointment as of most value. After it I would place mercurol, bichloride, protoiodide, tannate, blue mass, grey powder, biniodide, fumigations, inhalations, and for extreme cases hypodermic injections of mercury. The unguentum hydrargyri comes to us in the form of metallic mercury minutely subdivided, and it is absorbed directly into the blood in the way described. I do not think that the theory that the mercury is inhaled from inunction is well founded. An additional advantage possessed by blue ointment is that, not being given by the stomach, it does not cause any gastric or intestinal trouble. There is, however, a serious objection to this form of administering mercury, and it is this, that it is extremely nasty, and therefore very few patients can be induced to continue it for any length of time. The method of giving the inunction is as follows. The patient may lie on a table, or sit on a chair, leaning on the back. The rubbing should by preference be done by an attendant who ought to have on a pair of rubber gloves to protect himself. The sites selected for the rubbing should be the back and loins. When it is impossible for the patient to have a rubber he can apply the inunctions himself, taking care to select those parts of the body where the lymphatics are most freely distributed—namely, the inner sides of the arms, the axillary line of the chest, the inner sides of the thighs, and over the popliteal spaces. This gives eight areas that can be used for the inunction, and they should be used in rotation. If the patient has an attendant the dose in a northern climate should be about one drachm or even one and a half drachms. If the patient does the rubbing himself he should use from one and a half to two drachms, as no patient will rub the mercury in so thoroughly as an attendant. After the inunction the patient should put on his shirt or drawers and wear them through the night. In the morning he can take a hot bath and wash off the mercury. The amount of inunction should be governed by the patient, some being able to take much more than others, the same as internal medications. Whenever the teeth become the least bit sensitive the inunction must be stopped for two days and then resumed at a smaller dose and kept at the point just below tolerance.

In regard, next, to protoiodide, probably this medicine is used at the present day more than any other in the treatment of secondary syphilis. In some cases it controls the symptoms remarkably well, but in the majority of cases it is of very little use. Valuable time is often lost by starting a patient on this preparation of mercury, it being found later that some other form of the medicine will have to be given to control the disease. The chief objection to protoiodide is that in a large number of cases it causes intestinal disturbance, and not unfrequently gastric disturbance as well, while in others it produces what can only be described as a general breakdown. Just about the time when results are expected from the drug the patient may lose flesh rapidly or gastro-enteritis may suddenly develop, and in either case his medicine will have to be stopped and some other preparation of mercury given. It is customary in using protoiodide to start with one-fourth or one-fifth of a grain three times a day and increase the dose slowly until constitutional effects are produced, as shown by slight tenderness of the gums or until signs of improvement are manifested. It is sometimes necessary to give enormous doses of this drug before any improvement is noticed.

Tannate of mercury acts in about the same way as protoiodide, and it has been my experience that those cases that do well under one drug do well also under the other, and *vice versâ*. With tannate of mercury it is customary to begin with one-half grain three times a day and to gradually increase the dosage in the same way as when using protoiodide.

Blue mass, if exhibited with a slight intestinal astringent like tannic acid, will control symptoms of syphilis very satisfactorily, but if given alone it is apt to cause intestinal and gastric disturbance. The usual dose is from one to three grains three times a day.

Grey powder is sometimes borne where other preparations of mercury cause disturbance, the dose being one grain gradually increased to the point of tolerance. It is a very mild preparation of mercury and is probably the best for treating children. The objection to this preparation is that unless perfectly fresh the metallic mercury separates from the chalk and gathering into larger globules settles at the bottom.

Bichloride is a very reliable preparation of mercury. It almost invariably controls the symptoms. It has, however, to be taken in solution and it frequently causes gastric and intestinal disturbance, though not to anything like the same extent as protoiodide. This preparation should not be given in the syrup of sarsaparilla compound because it forms a precipitate. It is better given in the tincture of gentian compound, or if iron is indicated it can be given in elixir gentianæ cum ferro.

Fumigations are of great benefit in cases of obstinate skin eruption. For this method of treatment probably calomel is the best and it can be given in 20-grain doses. Fumigations may be given every second, third, or fourth day. This treatment, however, is rather exhausting to the patient.

With regard to inhalations, lately there has been recommended the wearing of cotton or woollen pads soaked with mercury on the chest, the idea being that the mercury is inhaled by the patient. It is admitted, however, even by those who strongly recommend this treatment, that it is only of service in mild cases of syphilis.

As to iron, it is not well to give this in treating syphilis until the tolerance of the patient to mercury has been established, because if iron and mercury are given together at the outset an explosive salivation is liable to occur. Yet the symptoms of some patients which it is impossible to control by mercury alone will be found to come under control when iron is added.

With regard to hypodermic injection, in hypodermic injections of mercury the bichloride is the form of the drug which is most often used. Calomel is also frequently given. Probably as handy and trustworthy a preparation as one can use is the following: bichloride of mercury, one grain; glycerine, one drachm; and water, one drachm. This is a stable preparation and can be kept for several days or weeks. 10 minims of this will represent one-twelfth of a grain of bichloride of mercury. It is always the custom to give an injection directly into the muscles of the gluteal region. The technique is as follows. First clean the skin by soap and water and then by bichloride sponge. Draw into the sponge a few minims of 4 per cent. solution of cocaine. Drive the needle directly into the gluteal region as far as it will go. Introduce about four drops of cocaine. Then unscrew the barrel of the syringe. Leave a drop of the solution in the cap of the needle, the needle, of course, being left in the tissue. Throw out all the cocaine left in the barrel of the syringe and fill it with about 15 minims of the preparation given above. Then screw the barrel of the syringe on to the needle again, being careful that no bubble of air is admitted. Throw the solution into the tissue, using in the first injection 10 minims. Two days afterwards the patient should be given another injection of the same dose. If two days later he shows no improvement the dose may be gradually increased, giving 12, 14, or 16 minims, as the case requires. After the injection the syringe is withdrawn and the thumb is placed over the puncture, but the place is not rubbed in the least. If the technique has been carefully followed an abscess will never result. It has been my experience that patients do not like this form of treatment and that while they may return for one or two injections, after that they are likely to disappear. Yet in very severe cases there is no doubt but that the hypodermic method will control the symptoms much better than any other way of exhibiting the drug. After injections nodules and painful spots are often left in the gluteal region, sometimes persisting for several

years and being very disagreeable to the patient. Still, I believe with Lydston[1] that if hypodermic injections can be performed without the production of local injurious effects they represent the ideal treatment for syphilis. I have used mercurol hypodermically in two cases. In one of these no trouble followed the first injection, but after the second injection a large abscess formed on the site. As I did not give the injections myself I do not know whether the technique was followed. In the other case no abscess resulted but the injection was fully as painful as those made with bichloride; and there is this drawback to the use of mercurol hypodermically, that it has to be prepared fresh each time it is wanted for use. The results obtained by using mercurol hypodermically as far as controlling the symptoms is concerned are very good. I have also used cypridol in two cases. Following the directions of the manufacturer I gave ten minims every second day in the gluteal region. There was no pain, but the disease was not controlled and excessive salivation followed, necessitating a change of medicine. Possibly further experiments with this drug may show better results.

I now come to the second part of my paper in which I propose to deal more in detail with the experience I have had with mercurol given in tabloid form. My experiments with this drug, which were conducted at the Bellevue Hospital, New York city, extended over a period of eight and a half months, and during that time I treated 180 cases. Of those entered on my books 74 either did not return after the first visit or were too short a time under observation to be reported. In addition to these I have eliminated 11 others whose irregularity of attendance rendered the records of their cases of little or no use. This leaves the number of cases to be reported on 95. These were under observation for the following periods: over six months, 18; five months, 9; four months, 7; three months, 18; two months, 16; one month, 13; and less than one month, 14. The dosage, regulated either by the point of tolerance being reached or by the disease being brought under control, varied as follows: a quarter of a grain, 1; one half grain, 2; one grain, 18; one and a half grains, 2; two grains, 23; two and a half grains, 3; three grains, 21; four grains, 14; five grains, 8; and six grains, 3. In 64 of those 95 cases the disease was controlled as follows: in two weeks, 8; three weeks, 12; four weeks, 14; five weeks, 6; six weeks, 5; seven weeks, 2; two months, 8; ten weeks, 2; three months, 5; and four months, 1. The remainder I find are marked thus: decidedly improved, 17; improved, 8; no improvement in two weeks, 3; no improvement in four weeks, 1; and no improvement in three months, 2. In regard to the latter cases, it is of course necessary to bear in mind that these were all dispensary patients and it is uncertain whether they took their medicine regularly.

In making these trials my plan was to increase the medicine steadily from one grain until the symptoms were controlled or until there was a slight tendency on the part of the teeth and gums to become tender. If the symptoms were not controlled before the physiological effect of the mercury made itself felt I added small doses of potassium iodide, and in every case where the medicine was taken according to directions, with the exceptions noted above, I succeeded in controlling the symptoms. It will be seen that in some cases three and even four months elapsed before the disease could be said to be thoroughly under control. These, however, were cases in which the drug was given before the eruption appeared, and the patient was not pronounced free of his symptoms until the chancre as well as other manifestations had disappeared, and, as is generally known, a chancre frequently persists for the length of time referred to.

In 67 out of the 95 cases which I have tabulated no other medicine than mercurol was given. In 15 out of the remaining 28 the addition of iodide of potassium was found to be sufficient to control the disease, while in six others the addition of an iron tonic sufficed for this purpose.

Out of all the cases of which I have examined the records only one suffered from gastric irritation, 11 suffered from diarrhœa, and three lost in weight. The one patient who suffered from gastric irritation could not continue taking the medicine and a change was made. The 11 who suffered from diarrhœa, were relieved by small doses of bismuth subnitrate, continuing their medicine. After a time the bismuth was stopped, the patient continuing on his medicine with no disagreeable results. One other patient was changed from mercurol to unguentum hydrargyri because the mercurol did not control his symptoms even with the addition of potassium iodide. In those cases that lost flesh the dose was decreased and the patient continued on the medicine with no disagreeable results. It may therefore be said that only one case out of the whole number had to be taken off mercurol. Of all the patients treated it will be noted that there were only two who could not take a grain of mercurol, the average dose in the other cases being about two grains three times a day. Having used the drug now for about 14 months I recommend that a patient be started on one grain three times a day. On the fourth day he should be given an additional grain, and four days later another grain, the increase being continued at this rate every fourth day until there is slight salivation or slight looseness of the bowels or there begins to be some improvement in the patient. If diarrhœa occurs the patient should be given for a time about 10 grains of bismuth subnitrate three times a day or sufficient doses to control the diarrhœa, the medicine being at the same time continued and possibly increased. After a time it will probably be found that the bismuth can be stopped. Mercurol, like all other preparations of mercury, will not always control the secondaries, and in such cases potassium iodide should be added, beginning with five grains a day. Probably in the course of a month or so it will be found that the iodide can be dropped and the patient continued on the mercurol. And here I would emphasise the fact that mercurol should always be given in pill form—never in solution because of its instability.

It is not necessary that I should report all the cases individually, but I may be allowed to refer to a few of the more remarkable among them and to some of those in which other medicines had failed to control the disease. The following speak for themselves and in my opinion show a very satisfactory record for the drug.

Case 1 had been taking bichloride for one month with very little improvement. Under mercurol, three grains maximum dosage, the symptoms were under control in five weeks.

Case 2 had been under biniodide of mercury (one-sixteenth of a grain) and potassium iodide (five grains), which caused iodism. His symptoms were controlled in one month under half a grain of mercurol.

In Case 3 unguentum hydrargyri had failed to control the disease. The patient was put on mercurol and the dosage pushed up to six grains three times a day. The disease was thoroughly under control in seven weeks.

Case 4 had been on three-eighths of a grain of biniodide of mercury and 20 grains of potassium iodide for two months. The medicine caused nausea and vomiting. Having been put on mercurol and the dosage gradually increased to five grains three times a day the symptoms were controlled in three weeks.

Case 5 had been taking hydrargyrum bichloride (one-twelfth of a grain) three times a day, under which an eruption on his face had faded, but the eruption on his body still persisted. His symptoms disappeared in two weeks under a maximum dose of three grains of mercurol three times a day.

Case 6 had been on bichloride of mercury (three-sixteenths of a grain) for three months, in spite of which he had palmar syphilide of an eczematous variety. All appearances of the disease disappeared after he had been one month on mercurol, his maximum dose being three grains three times a day.

Case 7 had been taking one-quarter of a grain of mercurol and 15 grains of potassium iodide, with the result that the eruption had decidedly improved, though not to the extent that it should have done. There were thickened red patches on the face, covered with scaly eruptions. The symptoms almost entirely disappeared within three weeks under a maximum dosage of five grains of mercurol three times a day and 15 grains of potassium iodide.

Case 8 had been treated at the New York City Hospital with inunctions of mercury, under which the eruptions disappeared, but the pains in the bones still persisted. He was relieved in three weeks under a maximum dosage of four grains of mercurol three times a day.

Case 9 had been taking other forms of mercury for six months. The form which had done him most good was bichloride. Yet one-fifth of a grain did not entirely control the disease. He had been taking that for two months when he was placed on mercurol. The dosage in his case was

[1] The Treatment of Syphilis, by G. Frank Lydston, Chicago, Professor of Genito-Urinary Surgery, Medical Department, Illinois State University. The Medical Standard, February, 1901.

pushed up to six grains three times a day, and at the end of seven weeks all his symptoms had disappeared.

Case 10 had been taking medicine off and on for two years, but his symptoms never disappeared entirely. After being two weeks on mercurol (two grains three times a day) with the addition of potassium iodide, all symptoms had disappeared.

I use the drug in my private practice to the exclusion of all others, and my experience is that I get better results in the treatment of my private patients than I do in that of the patients who come to the dispensary. This may be due to the fact that the patients are better nourished and that their stomachs have not been subjected to such severe treatment by the use of alcohol. Possibly, also, it is in some measure due to the fact that they take their medicine more regularly, besides being more careful to follow out the general regimen. I have now under treatment 42 private patients, and a noteworthy circumstance is that in only one of the number has it been necessary to add potassium iodide to control the symptoms. One of these patients had been treated at Hot Springs in 1898. For six months thereafter he saw no signs of the disease; but then, having indulged in a protracted spree, the eruption showed up again, and for the last two years he had been taking all sorts of medicines in the vain effort to get rid of the disease. When he came to me I put him on mercurol, the maximum dose being three grains three times a day, and at the same time gave him 15 grains of sodium iodide, under which treatment the disease was absolutely controlled in six weeks. Another when he came to me had an immense chancre of the chin, syphilitic angina, macular eruption on the body, and mucous patches on the lip and scrotum. He had been taking hydrargyrum protoiodide for four weeks but was steadily getting worse. I found that the highest dose of mercurol he could stand was two grains three times a day and that this was not strong enough to control the disease. I therefore changed the treatment to inunction of mercury. Five days later he came back with double iritis and he was given a hypodermic injection of bichloride of mercury. I have not seen him since. As a rule, I find in private practice, as in dispensary practice, that a dose of two or three grains three times a day is the most that patients can stand or require.

In conclusion, I may remark that the treatment of syphilis may or may not be revolutionised by the discovery about which we are now hearing so much, of the coccus which causes the disease; but it appears to me that the probabilities are that, for a considerable time to come at all events, mercury will continue to maintain the position it has held for 400 years as practically the specific for syphilis. Under these circumstances it is of the highest possible consequence that we should ascertain the best method of administering the medicine, and I have found no form so far in which it can be given with such good results as mercurol.

New York.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

SEQUELA TO A CASE OF RADICAL CURE OF HERNIA.

BY WILLIAM DICK, M.B., F.R.C.S. EDIN.,
MAJOR R.A.M.C., ASSISTANT PROFESSOR OF MILITARY SURGERY, ARMY MEDICAL SCHOOL, NETLEY.

THE following case, I think, is interesting.

A private was operated on at Pretoria on Jan. 28th, 1901, for left inguinal hernia. About ten days afterwards a swelling began to appear in the left side of his abdomen, primary union having taken place in the operation wound; this gradually got larger and he was invalided home, arriving at Netley on May 18th. On examination after arrival there was seen the incision of the operation perfectly healed, and there was to be felt and seen a tumour of about the size of two closed fists, filling the whole of the left side of the abdomen, very hard and with no sense of fluctuation. The man's general condition was good; there was no cachexia or rise of temperature. The diagnosis was that of some deep-seated inflammatory condition, but still it was thought that it might possibly be a sarcoma. On May 31st an incision was made over the tumour and the muscular wall of the abdomen was cut through; no peritoneum could be recognised. An aspirating needle was then put into the tumour and pushed deeply, when a little pus was withdrawn. The tumour was then cut into; it was very hard, and the relations of abdominal contents were not made out; when the incision had gone to the depth of about three inches a small cavity was found with a little fluid in it. This being explored by the finger a foreign body was felt which was readily extracted by forceps. On examination this was seen to be eight silk ligatures interlocked, such as might be used for ligaturing off the omentum in sections, which no doubt was the case; they were covered with a caseating, crumbling material. A drainage-tube was put in and was retained for 48 hours and then withdrawn. The wound healed slowly with very little discharge. The mass of thickening gradually disappeared, there never being a rise of temperature during the healing process. The man went out perfectly fit, exactly three months after the operation, no trace of the tumour being left.

Netley.

A CASE OF TETANUS; USE OF ANTI-TETANIC SERUM; DEATH.

BY T. GRAHAM SCOTT, M.R.C.S. ENG., L.R.C.P. LOND.

A WOMAN, aged 21 years, was first seen by me on Sept. 25th, 1901. Six days previously, on Sept. 19th, a nail had penetrated the right foot just below the ball of the little toe, passing through the sole of the boot and the stocking. After the nail was withdrawn the wound closed and gave her very little trouble for the next three days. On the fourth day it was painful enough for her to keep her foot raised, and in the course of the two days following a small red swelling appeared on the dorsum of the foot above the metatarso-phalangeal joint. On the fifth day after the accident she had aching pains in her back and a stiff neck, and when seen on the sixth day she had well-marked trismus, tonic spasms of the muscles of the neck and back, and occasional slight clonic spasms. The temperature was normal and she took liquid food without much difficulty. Later in the day, at about 6.30 P.M., 10 cubic centimetres of antitoxin from the Institut Pasteur de Paris were injected into the skin of the abdomen, the clonic spasms having by this time become much more severe. At 9 P.M. chloroform was administered and a large area of skin and subcutaneous tissue was removed to a depth slightly greater than that of the original puncture of the nail, both the nail wound and the swelling on the dorsum being taken away. She rallied well from the operation, but as the effect of the chloroform passed off the spasms, both clonic and tonic, returned with much severity. Another 10 cubic centimetres of antitoxin had been injected during the anæsthesia and half a grain of morphia was now given in addition. During the night it was necessary to keep up the administration of chloroform at short intervals (a Junker's inhaler being employed), and towards morning 10 cubic centimetres of antitoxin were again injected, as well as half a grain of morphia. At about 9 A.M. there was considerably less spasm in the muscles of the lower jaw, but elsewhere the spasm had increased, the temperature had risen to 104° F., and the patient already showed considerable signs of exhaustion which increased as the day went on and she died at about 3 P.M. She became much cyanosed towards the end, when brandy was injected and inhalation of oxygen used, but without success.

I must gratefully acknowledge the invaluable help I received from Dr. W. G. Stone and Dr. W. Thornely during the case.

Denmark Hill, S.E.

DEVON AND CORNWALL EAR AND THROAT HOSPITAL, PLYMOUTH.—The fourteenth annual meeting of the supporters of this institution was held on Oct. 4th. The medical report showed that 904 cases had been treated, against 922 in the preceding year. 150 operations had been performed. The financial statement showed a favourable balance of £20. The old hospital in Princess-square was vacated in October, 1900, when the new building in North-street was opened. The committee state that this change has been most beneficial, the old hospital being too small.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ST. GEORGE'S HOSPITAL.

A CASE OF ACUTE HÆMORRHAGIC PANCREATITIS.

(Under the care of Mr. H. W. ALLINGHAM.)

WE publish below two examples of an exceedingly rare disease, acute pancreatitis. One case occurred in St. George's Hospital, London, and the other in the Scarborough Hospital. In each of them the patient was a man who was seized suddenly with a very severe pain in the abdomen and with vomiting; the pain and vomiting continued. In each case a laparotomy was performed—in the former because it was thought that there was intestinal obstruction, while in the latter the true diagnosis was suggested, but there was a suspicion of a perforation. Both patients died, one within 48 hours and the other within 20 hours of the onset of the illness. Such is the typical history of an attack of acute pancreatitis. A sudden and most acute attack of pain in the abdomen accompanied by persistent vomiting arises without apparent cause in a patient, generally a man, who has hitherto been in good health, though in a few cases a history may be obtained of a previous slighter attack. The symptoms simulate intestinal obstruction or a perforative peritonitis, and in consequence in no small number of these cases an abdominal section has been performed. In the vast majority of cases a rapidly fatal result ensues. With our present knowledge it is probably not always possible to diagnose acute pancreatitis, but the great intensity of the symptoms is very suggestive. As to its etiology there are two views now current. One ascribes it to the entrance of bile into the pancreas in consequence of a blocking of the common opening into the duodenum. This view has been chiefly advocated by Halsted and is mainly supported by some experiments on dogs. It is by no means improbable and may account for some of the cases, but there is also much support for the other theory that has been advanced, which ascribes the acute inflammation of the pancreas to the introduction of micro-organisms from the duodenum. In several cases microbes, especially the bacillus coli communis, have been found in abundance in the diseased tissues, and even when allowance has been made for the ease with which bacteria from the bowels invade the neighbouring tissues after death it appears probable that these micro-organisms have a causal connexion with the pancreatic inflammation. For the notes of the following case we are indebted to Mr. Charles R. Keyser, surgical registrar.

A man, aged 26 years, was admitted into St. George's Hospital on Sept. 9th, under the care of Mr. H. W. Allingham. The history was as follows. On Sept. 8th he was seized with a sudden and severe attack of vomiting, followed almost immediately by excruciating pain in the abdomen, chiefly on the left side, which had continued until admission. The vomiting had also persisted and was almost constant. The bowels were absolutely constipated, neither flatus nor fæces having been passed; there was also pain on micturition. The bowels were opened for the last time on Sept. 6th. The patient stated that one year previously he had suffered from a similar though milder attack. The temperature was 98·6° F. and the pulse was 120, and he looked very ill. There was no cyanosis of the face or of the abdominal wall. The abdomen was slightly distended, chiefly around the umbilicus, was quite soft, and moved slightly on respiration in a quivering sort of way. Pain was present on respiration and on palpation, especially on the left side of the umbilicus, where some resistance was felt. There was no tenderness in the right iliac region and there was no jaundice. A diagnosis of acute intestinal obstruction was made and immediate operation advised.

Gas and ether, and subsequently chloroform, having been given, Mr. Allingham opened the abdomen in the middle line below the umbilicus. On opening the peritoneum some blood-stained fluid escaped, but no other abnormal condition could be felt. There was no peritonitis and the intestines were but slightly distended. The skin incision was enlarged upwards and the intestines were examined from the jejunum to the rectum; there was no obstruction. Acute hæmorrhagic pancreatitis was immediately thought of, but the patient was not in a condition to stand any prolongation of the operation; before closing the abdomen it was noticed that the omentum was much redder than normal. On the next day the patient was distinctly better, the pain being less and the vomiting having stopped, but the pulse was 156 and the temperature was 97·8°. He complained of thirst and was unable to pass his urine. The abdomen was slightly distended and did not move on respiration; the bowels had not acted nor had any flatus been passed in spite of enemas and the passage of a rectal tube, &c. It was obvious, therefore, that the improvement, if any, in his condition was only in relation to subjective symptoms. He gradually became worse and died early the next morning.

Necropsy.—Dr. R. S. Trevor, assistant curator of the museum, who made the post-mortem examination, thus describes the condition found after death. There were 10 ounces of blood-stained fluid in each pleural cavity. Both lungs were sodden with blood and serous fluid and there was much frothy mucus in the tubes. The pericardium was healthy. There was a small amount of blood-stained fluid in the peritoneal cavity and there were a few clots in the pelvis. There was no obstruction or strangulation of the intestines. In the neighbourhood of the pancreas the fat around and in the mesentery was very blood-stained. The pancreas was much enlarged and there were a few hæmorrhages in the liver. The gall-bladder contained no stones and the bile was very fluid and escaped freely from the papilla duodenalis. The pancreas was increased in thickness to nearly four times its usual size; this increase mainly affected the body. The surrounding fat was deeply blood-stained and in places was softened into red masses of a jelly-like consistency with a very offensive odour. There was much matting together of the parts, the pancreas being firmly adherent to the stomach as well as to the spleen and left kidney by a mass of tissue much infiltrated with blood. There were numerous areas of fat necrosis in the vicinity of the pancreas as well as in the omental fat. On cutting into the pancreas the gland substance was seen to be much altered, more particularly in the body of the organ; in the head and tail lobulation was still present. The tail on section was uniformly red in colour; the head looked nearly normal but there were a few darker areas to be seen. In the body the normal lobulation was absent and the gland substance was here of a greyish-black colour with irregularly scattered islands of a yellowish tint. It was softened and pulpy; the duct of Santorini opened into the duodenum by a separate papilla situated just above the biliary papilla. There was no calculus in the ampulla of Vater, but on squeezing the head of the pancreas white cheesy material escaped from the biliary papilla and the papilla for Santorini's duct. The splenic vein was dilated and as it crossed the tail of the pancreas there was adherent ante-mortem clot in it, but the lumen was not completely occluded by clot. Dr. H. R. Spitta, assistant bacteriologist to the hospital, reported that cultures taken from the substance of the most affected area of the pancreas grew typical bacillus coli communis.

Remarks by Mr. KEYSER.—Acute hæmorrhagic pancreatitis is comparatively so rare a disease and simulates intestinal obstruction so closely that every case ought to be recorded, so that by paying attention to the symptoms and course of the malady it may be possible in the future to differentiate the two conditions. A good many cases have already been reported, but the diagnosis has hardly ever been made with certainty before operation or death, which last is unfortunately the usual result of the disease. Halsted[1] has reported a case and lays especial stress on two symptoms—viz., excruciating pain in the abdomen, exceeding that produced by any other disease, and cyanosis, both of the face and of the abdominal wall, so that an imprint of the fingers can readily be obtained on pressure. Only the former of these two indications was present in the case described above. The probable cause of the disease is as Halsted and Opie suggest—retrojection of bile into the pancreas produced by the impaction of a very small calculus in the ampulla of

[1] Johns Hopkins Hospital Bulletin, 1901, Nos. 121, 122, and 123.

Vater. As is well known, the common bile-duct usually joins the pancreatic duct (duct of Wirsung) a short distance from the duodenum, and the two channels form a slightly dilated ampulla before opening on the surface of the second portion of the duodenum. This orifice, Hyrtl[2] states, is narrower than the lumen of the gall-duct at any point, or is at least less distensible, so that gall-stones often remain impacted at this point.

The conditions necessary for the production of acute hæmorrhagic pancreatitis by a calculus are set forth by Halsted as follows. 1. In order that bile may be retrojected into the pancreatic duct the stone must be (*a*) too small to occlude the pancreatic duct or to interfere with the force of the jet and at the same time (*b*) too large to pass the ampulla. 2. One calculus would be more likely to cause the pancreatitis than several, for other stones in the duct, unless very small, would weaken the force of the bile-spurt which drives the ball-valve against the papillary orifice. 3. The gall-bladder must be normal or nearly so—not thickened, shrunken, or weakened by inflammation. Thus a small calculus in the ampulla of Vater converts the two ducts into a continuous channel, while a large stone might simultaneously obstruct the duodenal orifice of the diverticulum and the orifices of the ducts which enter it, thus damming back bile and pancreatic juice upon their respective glands. Opie, who performed the necropsy on Halsted's case, made the following experiments on dogs: in five instances the duodenum was opened and the duct was injected with bile, varying from 2·5 to five cubic centimetres. In two other cases the duct was opened, injected with bile, and ligated. In all hæmorrhagic pancreatitis and fat necrosis were produced and verified by examination post mortem. If the theory set forth above is correct, and it certainly seems probable from Opie's experiments, the obvious treatment is to cut down on the duodenum and to remove the calculus from the ampulla of Vater. In the case I have described no calculus was found, but it must always be so exceedingly small that unless special precautions are taken it may very readily be overlooked or washed away. I am indebted to Mr. Allingham for permission to record the case.

SCARBOROUGH HOSPITAL.

A CASE OF ACUTE HÆMORRHAGIC PANCREATITIS.

(Under the care of Dr. G. B. HUNT.)

For the notes of the case we are indebted to Dr. C. H. Brodribb.

A man, aged 51 years, had been quite well until the morning of August 15th, when shortly after eating his breakfast he went to his work feeling "unwell"; soon he became worse, with severe abdominal pain and vomiting, and was taken home. A medical man was sent for, who saw him for the first time at 3 P.M. and again at 8 P.M., when finding that the vomiting was more frequent, that the patient was becoming collapsed, and that there was some slight dulness in the left flank he asked another practitioner to see him. A suggestion of perforated duodenal ulcer was made and the man was advised to go into hospital. His bowels had been opened during the afternoon. The previous history was good, the patient never having had any illness that he knew of.

The patient was admitted into the Scarborough Hospital about 10 P.M. The temperature was 96° F., with a clammy skin and small, feeble, regular pulse of 88. He was quite conscious; indeed, he was very bright mentally considering his collapsed condition. He was vomiting ill-smelling bile-stained fluid and complaining of pain in his abdomen, chiefly in the umbilical region. Examination of the abdomen showed it to move well with respiration and to be regular in contour. There was but little tenderness and no rigidity, tumour, or enlargement of any organ could be made out. Percussion showed dulness in both flanks which was moveable with position. There was no tympanites or displacement of liver dulness. A catheter passed before admission drew off normal urine. He was watched for some 50 minutes, when the dulness in the flanks becoming obviously increased and his pulse smaller—at 95—Dr. Brodribb telephoned his condition to Dr. Hunt who, after seeing him, suggested an acute pancreatitis.

An operation was at once performed, the abdomen being opened in the middle line from the ensiform cartilage to the umbilicus. A very large quantity of deeply brown-stained fluid at once escaped. The omentum was examined and was found to show particles of necrosed fat all over it; also the appendices epiploicæ were found to be necrosed. A large hard mass could be felt in the region of the pancreas. The stomach, duodenum, and other organs were apparently normal. The patient's condition being bad the abdomen was rapidly washed out with hot normal saline solution and sewn up. He was put back to bed very collapsed and lived about three hours.

Necropsy.—The post-mortem examination was confined to the abdomen. The fat throughout the abdomen showed necrosis in patches, also small patches were found on the parietal peritoneum. These patches varied in size from that of a pin's head to that of a thumbnail and were firm and of a glistening, dark greyish colour. The pancreas was much enlarged, the head being as much as two and half inches thick and dark red from the extravasated blood. The head was the part chiefly affected, the process becoming less severe towards the tail which at the tip was of its natural colour. There was no peritonitis. The spleen, liver, duodenum, and other organs seemed to be normal.

Remarks by Dr. BRODRIBB.—The extreme rapidity of the onset and collapse, the rapid increase of dulness in the flanks with the absence of tympanites, signs of peritonitis, or localising symptoms seemed to me to be inconsistent with the diagnosis of any one of the more common acute abdominal conditions calling for laparotomy, while on opening the abdomen the condition of the omentum at once pointed to pancreatic disease, which was confirmed by feeling the swollen pancreas. The great quantity of brown-stained fluid effused was very striking. I find in some cases previously recorded in THE LANCET that the colour of the fluid is said to be due to bile. I thought when I saw it that it was due to blood in which the pigment was changed to methæmoglobin, but unfortunately I was unable to test it. The pancreas and omentum were preserved by the formalin and glycerine method, which, it is interesting to note, turned all the patches of fat necrosis coal black. I have to thank Dr. Hunt for his kind permission to publish the case.

[2] Handbuch der Topographischen Anatomie, Vienna, 1882.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

General Meeting.—Presidential Address.

A MEETING of this society was held on Oct. 14th, the chair being occupied at first by Mr. J. H. MORGAN and subsequently by Dr. W. H. ALLCHIN, the outgoing and incoming presidents respectively.

At the general meeting of the society which immediately preceded the ordinary meeting the Treasurer's report and balance-sheet were presented and adopted.—A vote of thanks to the Treasurer, to the retiring President, and to the Secretaries was proposed, and Mr. J. H. MORGAN and the retiring Secretary, Mr. F. C. WALLIS, replied.

The incoming President, Dr. W. H. ALLCHIN, then took the chair, and after some preliminary remarks on the past and future work of the society, read the Presidential Address on the Responsibility of the Organism in Disease. He said that among the widest spread inclinations of the human mind, however uncultivated or unlearned, was the desire to ascertain the cause of such phenomena as came under observation. That this was the case in respect to disease, so far as the laity were concerned, was well known to most of them, and their patients were generally fully satisfied by ascribing the malady to "a chill" or in finding some ancestor supposed to have been similarly affected. This subject was chosen, for there were indications that in the far-reaching and all-important extension of their knowledge by the discovery of the part played by microbes in the production of morbid states the personal factor was running the risk of being somewhat lost sight of. The President then dealt with the present conception of the nature of life, and he pointed out how the earliest recorded Hippocratic teaching was strangely similar to that of the present day. In considering the environment he said that although the main purpose of his remarks dealt with the share taken by the individual in the causation and manifestation of disease, yet it was necessary to say a few

words upon the external conditions to which every living being was subject. For the present purpose the environment factors might be grouped as follows. 1. Violent contact, represented by blows, injuries, and laceration of internal structures by foreign bodies, such as calculi and the like. 2. Another group of external conditions was represented by such natural agents as heat, light, electricity, and as barometric pressure and gravity, and such subsidiary conditions as relative humidity or dryness of the atmosphere. 3. The third set of conditions were those which produced their effects in virtue of the chemical changes which they set up, and these included modifications of the ingesta and perversion of the alterations which they might undergo in the process of digestion and absorption—in fact the whole class of substances denominated poisons. As causes of disease these bodies were well known, and the recent development of bacteriology and a knowledge of the toxins elaborated by micro-organisms had widely extended their acquaintance with the agents of this group. Very striking as showing the variable composition and constitution of bioplasm were the effects of poisons, some of which were quite innocuous to some cells whilst violently toxic to others. In attempting to comprehend, therefore, the effects of external agencies, however simple or however complicated they might be, they had also to reckon with the responsive capacity of the living organism. How was it, for instance, that the exposure to cold and wet would in several persons under similar circumstances bring about very different forms of disease? Whilst one developed acute nephritis another was attacked with acute pneumonia; another had a rheumatic attack, and the fourth might not suffer at all. Great and important as was the discovery of the microbic cause of tuberculosis it would be long before those who had had any extensive experience of the ravages of that disease would admit that the bacillus tuberculosis was the only thing to be kept in view either in the causation, the prevention, or the treatment of the malady; and at the present day, with the vast impetus that had been given to the investigation of external conditions by the discovery of the bacterial origin of many diseases, there was a fear that the pendulum would swing too far in that direction with the result that too little attention would be paid to the individual and the share he took in the origination of the disease, or what was more important the part he should be made to play whether in the prevention of disease or in the treatment of it when existent. If now they turned to consider what bodily states were to be regarded as heritable they would find that the number was very considerably less than was formerly supposed and that the transmissibility even in those cases which were accepted was not so potent as was thought. In other words, it was less the disease itself than a predisposition or tendency towards it, often requiring for the development of the malady a suitable conjunction of external conditions, in the absence of which the individual escaped, though this could not always be so, for the tendency might be so strong as to assert itself in spite of the most favourable environment. Prominent among those conditions which tended to recur in successive generations were longevity and the reverse. States which insensibly departed from the healthy type, reaching to a degree in which the well-being was interfered with, were represented by an undue formation of fat, obesity, or an exceptional leanness, and such states were notoriously prone to characterise the members of families over many generations. A third group comprised such essentially nutritive disturbances as gout and diabetes. Possibly even the more marked illustrations of diseases appearing in the offspring similar to those from which the parents suffered were to be found among nervous maladies. As further illustrating the responsibility of the organism itself in the occurrence and manifestation of disease might be mentioned the undoubted influences exerted by age and sex. It was much to be desired that that society should prosecute some collective inquiry into the incidence of disease in successive generations. But in endeavouring to form some estimate of the share taken by the individual in the determination and manifestation of disease they were dealing with a subject that was essentially practical in all its bearings, however speculative might be the basis which subtended the application. The correct estimation of the value of the facts ascertained when inquiring into the family history and life-history of patients depended upon some knowledge of the workings of the organism in response to external stimuli, and of such inherent qualities and capabilities as the patient might possess. Whilst it might seem but little toward the framing of a diagnosis in the use of that term which was restricted to the mere naming of the disease, in a wider sense of comprehending the real nature of the case it was all important, and underlying as it did prognosis, the estimate of the individual resistance to the disease and furnishing therein the only rational plan of treatment, its study could not be too sedulously cultivated. He would claim, therefore, that he had not, after all, wandered far afield from their legitimate occupation and whilst *dulce est desipere in loco* he ventured to hope that his dissipation in generalities had not been out of place.

A vote of thanks, proposed by Dr. MITCHELL BRUCE and seconded by Mr. EDMUND OWEN, was accorded to the President for his address.

PATHOLOGICAL SOCIETY OF LONDON.

Sylvian Aneurysm.—Hæmorrhagic Myositis in Enteric Fever.—Pleuro-Œsophageal Fistula.—Imperforate Pharynx.—General Dilatation of the Aorta with Dissecting and Sacculated Aneurysms.—Hydatid of the Gall-bladder.—Exhibition of Specimens.

A MEETING of this society was held on Oct. 15th, Mr. W. WATSON CHEYNE, the President, being in the chair.

Dr. WAKELIN BARRATT and Dr. RICHARD M. RALPH exhibited a Right Sylvian Aneurysm lying upon the island of Reil and situated on the main trunk opposite the origin of the ascending parietal branch, the lumen of which was narrowed. The aneurysm, which was of the size of a pea, was met with in a female patient, aged 38 years. Left-sided weakness was noted during life, but no cortical softening was present, nor did the aneurysm rupture, death occurring from an intercurrent condition. No cause could be assigned for the aneurysm, the arteries at the base of the brain being elsewhere healthy. Endocarditis was absent and no evidence of syphilis was obtainable.

Dr. F. W. ANDREWES described a case of Muscular Hæmorrhage in Typhoid Fever dependent upon secondary infection with streptococcus pyogenes. The patient was a man, aged 18 years, admitted to hospital during the third week of a severe and typical attack of typhoid fever. He had chronic double otitis media. He died during a relapse on the fifty-second day of his illness. Two days before death there was pain in the left thigh, followed by a considerable swelling, suggesting deeply-seated fluid. The lesions found post mortem were those characteristic of typhoid fever. There was no endocarditis, and the vessels, including those of the affected limb, were natural. The swelling in the left thigh was due to diffuse extravasation of blood into the substance of the quadriceps extensor cruris, especially the vastus externus. There was no rupture of the muscular fibres. No other muscles were found affected. The affected muscle showed a moderate degree of Zenker's waxy, or hyaline, degeneration, with profuse extravasation of blood. It contained enormous numbers of streptococci and no other organisms. Streptococcus pyogenes was isolated from it in pure culture, and the same organism was found in the heart's blood and spleen, mingled with other bacteria. There was, therefore, good reason to believe that the hæmorrhage was associated with this secondary infection rather than with the primary typhoid fever. The affected muscle was exhibited, together with a teased preparation and microscopic sections showing the distribution of the streptococci and the characters of the degenerative changes in the muscle-fibres. Whether or not the lesion was a true myositis was open to discussion, though this was probably the case. Zenker, Trousseau, and others regarded such cases, which seemed to have been commoner then than now, as due to rupture of the muscle due to a primary waxy degeneration, which Zenker showed to be common in typhoid fever apart from muscular hæmorrhage. More recently it had been held by Arnold, Weihl, and others that waxy degeneration was more often a sequel than a cause of rupture and hæmorrhage, and this seemed to be the more reasonable explanation in the present case, in which the hæmorrhage was evidently septicæmic in character. —Dr. W. CAYLEY said that the present case supported the view that the hæmorrhage was due to streptococcic infection and not directly to the typhoid bacillus. He had seen more cases of hæmorrhage into muscles in typhus fever than in typhoid fever. He did not consider that waxy degeneration of the muscle was peculiar to typhoid fever, for it was often

present in cases of advanced phthisis. Although all the appearances commonly associated with inflammation might not be present in the muscles into which hæmorrhage had occurred, yet he was of the opinion that the condition was an inflammatory one.—Dr. H. M. FLETCHER pointed out the difficulty of making the examination of the muscles sufficiently complete so as to form any accurate idea of the relative frequency of the condition in typhoid fever.—Dr. NORMAN DALTON said that they should take the clinical evidence in conjunction with the pathological, and in this case there was evidence that the hæmorrhage had existed for at most 48 hours; had this been secondary to streptococcic infection it was certain there would have been more evidence of inflammation, and he thought it probable that the streptococcic infection occurred after the hæmorrhage.—Dr. W. BULLOCH was also of the opinion that the streptococcic infection was secondary to the intramuscular hæmorrhage. He also pointed out that Zenker's degeneration could be produced by ligature of a vessel supplying a muscle.—Dr. ANDREWES, in reply, said that although it was difficult to prove he was of the opinion that the streptococcic infection had some causal relation to the production of the hæmorrhage.

Dr. HUGH THURSFIELD described a case of Pleuro-œsophageal Fistula in a boy, aged four and a half years, who was the subject of a neglected empyema which had for six weeks been slowly discharging from sinuses situated in the front of the chest. After resection the pleural cavity did not drain very well, and about one month after operation food taken by the mouth began to pass out of the resection wound. The boy died a fortnight later. At the post-mortem examination a small communication was found to exist between the œsophagus and the right pleural cavity opposite the head of the third right rib. There was no amyloid disease, and no evidence of tubercle, caseous glands, or foreign body was found. The conclusion was that ulceration took place in the pleural cavity, leading to softening and perforation of the œsophageal wall.—Dr. A. F. VOELCKER referred to the fact that caseous lymphatic glands might soften and discharge into the bronchus or œsophagus and possibly also into the pleura. In a similar case which he had reported he had suggested that this was the probable explanation of the condition, and he thought the same explanation might hold good in the present case.—Dr. EDMUND CAUTLEY referred to a case in which he had diagnosed enlargement of the mediastinal gland. An abscess formed in the thorax which was drained and the child made a good recovery. He thought that a caseous gland was the most probable explanation in this case.

Mr. S. G. SHATTOCK described an example of Imperforate Pharynx in an agnathous lamb. Although imperforate rectum was so common in the human subject apart from accompanying grosser defects, it was remarkable that the persistence of the primitive condition (in which the gut terminated blindly at either end) was one of the rarest of malformations affecting the upper part of the alimentary canal and had never been met with except in conjunction with ill-development or absence of mandible or highly marked arrests in the cranio-facial axis, synotia, and cyclocephalus. Congenital atresia of the œsophagus was fairly frequent, but this had nothing in common with imperforate pharynx and was in no sense the homologue of imperforation of the rectum. As Mr. Shattock had pointed out, atresia of the œsophagus was invariably situated opposite the lower end of the trachea and was a condition acquired during fœtal life and probably in some way connected with the voluminous growth of the lungs and lower part of the trachea as a diverticulum from this spot of the anterior wall of the œsophagus. In imperforate pharynx the disposition corresponded with what would arise from the abnormal persistence of a normal phase of development. His's researches had shown that the stomodæum formed scarcely any of the buccal cavity; that the whole of the tongue was formed from the floor of the blind pharynx; and all this was shown in the specimen he exhibited. The lower jaw was wasting, but the stomodæum was represented in part by an area of mucous membrane covering the under side of the exposed palate and in part by the nasal cavity; there was no communication, however, between these parts and the post-jacent pharynx, from the floor of which a well-formed tongue projected.

Dr. FLETCHER showed a specimen of General Dilatation of the Aorta with Dissecting and Sacculated Aneurysms which Simulated New Growth of the Kidney. The patient, a man, aged 31 years, was on two occasions in St. Bartholomew's Hospital, during which periods he suffered from profuse hæmaturia and subsequently from hæmoptysis. There was a large, hard nodular tumour on the left side of the abdomen. He presented signs of double aortic disease. At the necropsy the whole of the aorta was enormously dilated; there was a large dissecting aneurysm involving the arch with a sacculated aneurysm on the descending thoracic portion. The abdominal tumour was formed by an aneurysm extending from the level of the diaphragm to the bifurcation, which was filled with firm clot. It lay in front of the left kidney.

Mr. L. H. MACGAVIN showed a specimen of Hydatid of the Gall-bladder; the patient had had a swelling in the abdomen for three years. The abdomen was opened and the hydatid was removed. Hydatid of the gall-bladder, apart from cases in which the liver was also invaded with hydatids, was rare, some three cases only having been reported.—Dr. NORMAN DALTON, who was present at the operation, said that the cystic duct was cut across and ligatured at the time of the operation and therefore there could be little doubt that the hydatid was in the gall-bladder.—Mr. SHATTOCK said that he had carefully searched the specimen for the cystic duct but had been unable to find it. He was of the opinion that the cyst was a pedunculated hydatid and not the gall-bladder, and this was further borne out by the microscopical examination of the wall. He suggested that the subject should be referred to the Sectional Committee for further investigation.

Dr. THURSFIELD showed two card specimens: (1) Cerebellar Tumour arising from the Ependyma; and (2) a case of Porencephaly.

Dr. LEE DICKINSON showed a specimen of Lymphadenoma of Bone.

CLINICAL SOCIETY OF LONDON.

Painful Condition of the Twelfth Pair of Ribs.—Displaced Strangulated Femoral Hernia.—Treatment of Wounded Joints.—Surgical Treatment of Ascites.

A MEETING of this society was held on Oct. 11th, Mr. ARTHUR BARKER, Vice-President, being in the chair.

The new volume of the society's Transactions was brought before the meeting. Mr. BARKER mentioned that the surplus volumes of the series were offered to members at a reduced rate.

Mr. J. JACKSON CLARKE read notes of a case of Painful Condition of the Twelfth Pair of Ribs. The patient was a nursemaid, aged 19 years. She first came for treatment on account of a forward bend of the spine (kyphosis), accompanied by a painful backward projection of the tips of both twelfth ribs. The former was corrected by the use of an antero-posterior support, but the condition of the twelfth ribs remained unchanged, any forward pressure upon them causing great distress. The pain was deeply-seated and Mr. Clarke referred the abnormal condition to rheumatoid inflammation of the costo-vertebral joints. So long as the spinal support was worn it sufficiently protected the ribs from pressure; when, however, the time came for leaving off the support the patient found that she could not bear the pressure of her dress upon the ribs. An attempt was made to palliate the condition by making apertures in the patient's stays, but this did not succeed. The patient was therefore advised to undergo an operation for the removal of as much of each twelfth rib as could be taken away without incising the erector spinæ. The operation consisted of cutting down on each bone in turn and removing one inch, including the cap of cartilage, with the periosteum. The deep parts were carefully drawn together by fine silk sutures before the skin-wounds were closed. Rapid healing ensued. There was no subsequent bulging at the site of the operations, and the pain was at once relieved and had not since returned. Mr. Clarke mentioned another case in which one of the twelfth ribs was the seat of occasional swelling, accompanied by great pain. The patient was a woman, aged 40 years, and the swelling was due to inflammation about the junction of the cartilage and the bone. In this case relief was obtained by an abdominal belt made with a recess to receive the tip of the rib.—Mr. BARKER congratulated Mr. Clarke on his paper. The condition must be rare and was outside his experience.—Dr. WILLIAM EWART was glad that the subject had been approached by the surgeons. He wished to refer to a condition which he had described as "acrochondralgia." It

was a very localised symptom and was due to a variety of causes; certainly it was aggravated by corsets unless one of the bones was broken. He would like to hear from Mr. Clarke what evidence there was of definite osteo-arthritic nature of the mischief in the costo-vertebral joint.—Mr. CLARKE, in reply, did not think that tight-lacing had anything to do with the production of the condition in his case. He thought that it was probably due to the action of the muscles on a weakened articulation. He took away about half an inch. The cases referred to by Dr. Ewart were interesting but were not parallel. He referred to the case of a woman, aged 40 years, who had acute pain in the tenth rib, which, when first seen, in the interval of the attacks, presented nothing abnormal, but later, during an attack, he found a swelling at the end of the rib of the size of a filbert. The pain was relieved by a suitable support.

Mr. THOMAS BRYANT read the notes of a case of Displaced Strangulated Femoral Hernia. The patient was a married woman, aged 32 years, who had been troubled with a femoral rupture for about five years but had not worn a truss. The rupture had come down every now and then, and she said that she had never experienced difficulty in its reduction, although on questioning her husband later it appeared that she had often used much force in reducing the rupture, and particularly on March 29th, two days before her present illness. Her illness commenced as a "bilious attack," and it was not till three days passed and the vomited matter had become stercoraceous that the possibility of the case being due to her reduced hernia had been realised and Mr. Bryant's advice sought. When seen on April 3rd she was in an extreme state of collapse and it was clear that life could not be saved. Her abdomen was distended but not tense and there was no swelling in the right femoral region, which was given as the seat of her hernia, although pressure with the pulp of the index finger over the right femoral canal elicited pain. An exploratory operation in the femoral region was, however, determined upon, based upon the established practice of first examining in every case of intestinal obstruction associated with a hernia the region in which a hernia existed. The operation was carried out in the usual way and the obstruction relieved. The operation was completed, but the patient sank as expected and died a few hours later. A partial post-mortem examination could alone be obtained, but from the specimen which was secured by Mr. C. R. C. Lyster, the house surgeon of Bolingbroke Hospital, and which, as dissected and mounted by Mr. Shattock, was now in the Museum of the Royal College of Surgeons of England, it seemed clear that the sac of the femoral hernia had been forced through a rupture of the femoral sheath at its lowest part or apex into the connective tissue of the thigh on the inner side of Scarpa's triangle, and that the seat of strangulation was at the neck of the sac, which was not, as was usually the case, at the femoral ring, but at the orifice of the femoral sheath through which the hernial sac had been forced. Mr. Bryant remarked that the case which he had read was clearly a very unusual one. Indeed, he had never seen or read of a femoral hernia being displaced as this must have been into the fatty connective tissue of the inner side of the thigh, with the seat of strangulation at least one and a half inches below the femoral ring and situated at the mouth of the opening in the femoral canal through which it was probably forced. Had there not been a distinct history of an old femoral hernia in this case there would not have been any local indication to lead the surgeon to suspect that the intestinal obstruction which the symptoms suggested was due to such a cause, for there was a total absence of all swelling, and the sign of pain on pressure over the femoral canal stood alone. Under these circumstances an abdominal operation might have been undertaken, and if so it would have been useless, for the seat of strangulation was outside the abdominal cavity, and could not by such a measure have been relieved, for it must be emphasised that during the operation, when the femoral sheath was first opened, the bowel which was in it was not seen, for it rested in a bloodless and collapsed condition upon its posterior wall, and it was not till the crural ring was enlarged that it made itself manifest by bulging forwards and arching downwards from the femoral ring to the seat of its stricture and the apex of the femoral canal. This portion of exposed intestine was quite healthy looking and pale and contrasted strongly with the deeply congested bowel which was subsequently withdrawn from the displaced hernial sac. The force employed had brought about primarily a rupture of the femoral sheath at its lower end and secondarily the gradual herniation of the femoral sac with its contents into the space in the connective tissue as demonstrated by the dissected specimen. This case was an example of a third variety of displaced femoral hernia. The first was the well-recognised form in which the small strangulated femoral hernia with its sac might be pressed out of sight and reduced, still strangulated behind the abdominal parietes, the one of "reduction *en masse*"; the second was where a large femoral hernia by some rupture of its sac might show itself as a tumour in the subcutaneous connective tissue above or below Poupart's ligament; and the third as a displaced hernia following the course of this case. In the many varieties of "displaced inguinal" hernia which had been described, and particularly by Mr. J. Birkett and Mr. Bryant in his "Practice of Surgery," the injurious effects of misapplied force had been fully recognised; indeed, it seemed probable that in all the varieties of displaced inguinal hernia it should be regarded as their probable cause. The case illustrated the evils of forcible taxis.—Mr. BARKER said that he had never met with exactly this variety of hernia. He raised the question whether taxis ought ever to be applied to a strangulated hernia, a practice which he had abandoned, he believed, with advantage. He thought that if this view were endorsed by a surgeon of Mr. Bryant's experience it might produce a good effect in practice, both private and in hospital, where he had often seen violent taxis applied in such cases to the detriment of the patient.—Mr. BRYANT, in reply, said it was clearly a femoral hernia, though when he first opened the sac the crural canal appeared to be empty, the intestine being collapsed and flat. He was disposed to agree with Mr. Barker in his remarks on taxis, at any rate in regard to femoral hernia, but an inguinal hernia was rather different. He would not, however, employ taxis even in the latter unless the patient was under an anæsthetic, and then only very gently. Anything like violence would be iniquitous. In a scrotal hernia the neck was usually very large, and it was much mixed up with omentum, so that the bowel was not so readily injured as in a femoral hernia.

Mr. CUTHBERT S. WALLACE read a paper on the Treatment of Wounded Joints. He remarked that wounds of joints fell into three categories: (1) those in which the joint injury was complicated by compound fracture and in which the wounded joint was the lesser injury (the treatment of such a case depended more upon the complicating wounds than on the wound of the joint); (2) wounds, or probable wounds of joints; and (3) doubtful wounds of joints, such as perforating or punctured wounds. The notes of three cases of the second group were read; one of these ended fatally, one recovered with a stiff knee, and the other with a moveable joint. The treatment of such injuries was then discussed and it was maintained that the cleansing of the wound must be mechanical, and therefore that all dirty tissue should be cut away with knife or scissors, and a douche if used was only beneficial because it removed fragments of dirt or soiled tissue; it was, therefore, sufficient to employ sterilised saline fluid, and antiseptic solutions were unnecessary. A search for a wound into the joint was not recommended, as if found it was unlikely that much good could be done, and if an opening was accidentally made into the capsule a serious harm might result. If the opening into the joint was obvious it was recommended to close the capsule without irrigation of the joint and to await developments. The notes of five cases of punctured wounds of joints with resulting infection were then read. In four instances practically full movement was obtained and in the fifth movement was limited to about one-quarter that normally present. It was thought that the best treatment of such cases was arthrotomy with sterilised saline solution and suture of the joint cavity. This process could be repeated once or twice if the condition required it. After this, if the temperature remained high, the incision into the joint could be left open and lavage practised daily. Mr. Wallace thought that if the infection reached the periarticular tissue surgery could do but little save opening any abscess that might form or ablation of the limb. Drainage by means of tubes through the joint or continuous irrigation were likely to do more harm than good.—Mr. BARKER agreed that in these cases antiseptics were not only useless but were often positively injurious. For many years he had employed only irrigations of normal saline solution whereby his results had improved. With this treatment he had obtained very good movement even in very

severe cases—gonorrhœal arthritis, for instance. He wished to lay down the principle that once a joint was infected it could not be disinfected.—Mr. F. C. WALLIS observed that it would be an advantage to have some definite plan of treatment laid down for these cases. Mr. Wallace's cases resembled those which he had brought before the society in 1898. These perforating wounds of joints if they became at all inflamed might be treated by a fairly free opening and drainage, a plan which had given him excellent results. In one case the knee-joint was exposed for six weeks, yet movement, though limited, was good. The introduction of drainage-tubes into the interior of the joint and the use of antiseptics were likely to bring about absolute ankylosis with protracted recovery.—Mr. F. C. ABBOTT pointed out that it was long the practice in suppurative peritonitis to make a small opening and to irrigate the cavity, and that treatment was generally agreed to be of the most hopeless kind. It was only recently that they had made large incisions and turned out the intestines so as to enable them to cleanse the entire cavity, and they had thereby got improved results. As to the treatment of adhesions in joints, he asked whether forcible movements were likely to be of more benefit than could be obtained by simple massage.—Mr. WALLACE, in reply, thought that where there was a large outer wound and a small wound into the joint it was worth while giving the joint a chance. He insisted on the fact that cleansing the joint was a purely mechanical procedure and it was no good trusting to antiseptics. He did not think that forcible movements could do any good.

Mr. C. W. MANSELL MOULLIN read a paper on the Treatment of Ascites by Suturing the Omentum to the Anterior Abdominal Wall. He read the notes of five cases of ascites dependent upon cirrhosis of the liver in which he had adopted this procedure with the view of establishing a collateral circulation, after the Drummond-Morrison method. Two cases died, one four weeks after the operation from pleurisy and the other one week after from exhaustion. In both of these the operation had been performed too late. The disease was too far advanced and there was no time for the anastomotic circulation to be developed. In one of the patients, who weighed over 15 stones, the liver weighed only three and a quarter pounds. The three other patients were discharged from hospital relieved. One could not be traced. The two others were alive and at work at the present time, two years after the operation. Mr. Mansell Moullin pointed out that so far as ascites was of mechanical origin there could be no question that the operation was capable of giving relief. There was the clinical evidence that a certain proportion of patients suffering from cirrhosis of the liver who were treated by repeated tapping got well at last, even after they had been tapped 20 or 30 times, and there was the pathological evidence of the enlargement of the ordinary anastomotic channels between the radicles of the portal and systemic circulations and of the very great development of accessory channels in the freshly formed adhesions, as, for instance, was shown most plainly by one of Morrison's cases which died from an operation for ventral hernia two years after the omentum had been sutured. If, on the other hand, the ascites was held to be not mechanical, or not wholly mechanical, in origin, but to be due to the impairment in activity of the liver cells caused by defective blood-supply, it was equally the fact that the only hope of restoring the activity of those cells and giving them a better blood-supply consisted in establishing a number of vascular adhesions between the contiguous surfaces of the liver and the abdominal wall at a period when compensatory growth was still possible. Mr. Mansell Moullin pointed out that the operation was not, if the cases were properly selected, one that was attended by any serious degree of risk. It was true that the mortality, as judged by statistics, had been very high up to the present, but this was always the case with new operations and was due to the fact that many of the cases were unsuitable, often because of disease in other organs of the body, and that there was a tendency to look upon the operation as a last resource, one only to be performed when everything else had been exhausted. With better selection and earlier operation there was no reason why the mortality should be appreciably higher than that of exploratory laparotomy. So far as technique was concerned, a median incision above the umbilicus was the most convenient and gave least trouble afterwards. Through it the whole of the upper surface of the liver could be reached and the omentum could be fixed to the abdominal wall by sutures passed from its peritoneal surface. Drainage was unnecessary and might be dangerous, as offering additional risk of sepsis. The fluid always collected again, but it collected in the lowest part of the abdomen and did not interfere with the formation of the adhesions. If it became excessive at any time it might be drawn off again; and this, as shown by the history of the cases which recovered, might require to be done many times in the first few months, until the anastomotic channels had enlarged sufficiently. Ascites was a late and a very serious symptom in cirrhosis, aggravating all the rest and hastening the course of the disease. If, therefore, it was not complicated by diseases of other organs, and if the accumulated fluid did not quickly disappear under the influence of iodide of potassium, it seemed more rational to try to establish an efficient collateral circulation without further delay by an operation which, under such conditions, was not attended by any grave degree of danger, than to allow the patient to drift on in a state of perpetually increasing misery, relieved now and then by tapping, until, in the vast majority of cases, his strength sunk so low that it was too late to do anything more than to watch the progress of the disease.—Dr. CAMPBELL THOMSON referred to a paper on this subject which he had read last session before another society in which he had drawn a distinction between the cases in which the ascites was directly due to the cirrhosis of the liver and those in which it was caused by peritonitis resulting from the cirrhosis. The latter were the cases in which operation was likely to prove beneficial, as proved by post-mortem investigations. The former class usually proved rapidly fatal. Recovery, when it took place, was presumably due to obliteration of the peritoneal cavity by the formation of adhesions, just as pleurisy was cured by the adhesion of the layers of the pleura.—Dr. A. E. SANSOM did not think that clinically it was possible to differentiate between the cases of pure cirrhosis and those associated with peritonitis. Cirrhosis was not a simple condition; on the contrary, it was a very complex thing, and he was not disposed to accept the previous speaker's conclusions in regard to the cases which recovered and those which did not. Therapeutically it was necessary to modify the balance of circulation and he thought that surgical measures constituted a better way of effecting this than the old-fashioned plan of tapping with copious diaphoresis.—Dr. NORMAN DALTON agreed with Mr. Mansell Moullin that a great deal depended upon the condition of the other organs. Certainly if there was marked œdema of the feet the results were not likely to be as good as when there was only ascites. He thought that the higher the incision was made the better in order to guard against the occurrence of ventral hernia which so often proved fatal later.—Mr. MANSELL MOULLIN, in reply, agreed with the last speaker in respect of the best site for the incision. He had operated after one or two tappings—i.e., somewhat early in the history of the ascites.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.—The annual meeting of this society, followed by the first ordinary meeting of the session, was held in the Library of the Royal Infirmary, Newcastle-upon-Tyne, on Oct. 10th, Dr. Robert Smith, the President, being in the chair.—The following officers were elected for the ensuing year:—President: Dr. Robert Smith. Vice-Presidents: Mr. J. Rutherford Morison, Dr. R. S. Peart, Dr. W. Gowans, and Dr. J. Adamson. Honorary secretaries: Dr. T. Beattie and Dr. A. M. Martin. Committee: Dr. D. Drummond, Dr. G. H. Hume, Dr. J. Limont, Dr. J. Murphy, Dr. James Drummond, Dr. R. A. Bolam, Dr. I. G. Modlin, Dr. H. B. Angus, and Dr. R. P. R. Lyle.—The following gentlemen were elected members of the society: Mr. R. Stuart (Durham), Mr. P. Campbell Smith (Middleton Hall), Dr. W. G. Thompson (Sunderland), and Dr. H. H. Gourley (Gosforth).—Dr. V. Rutherford showed cases of Rodent Ulcer and of Lupus treated by X Rays. Case 1 was that of a man, aged 57 years, who had been the subject of rodent ulcer at the inner canthus for seven years. His treatment had amounted to 45 exposures, each of a quarter of an hour's duration. The result was a soft and soundly-healed cicatrix. The second case was that of a woman, aged 71 years, who had been the subject of extensive lupus of doubtful origin, probably specific, and who was now almost cured after 30 exposures. In Case 3 the patient was a woman, aged 50 years, suffering from rodent ulcer of the upper lip. She was improving after 15 exposures.—The President, Mr. G. Foggin, Dr. G. H. Hume, Mr. Morison, Dr. J. B. Wardale, and Dr. A. S. Percival took part in the subsequent discussion, which elicited the following points. The normal tissues around the

part exposed were protected by tinfoil. Dr. Foggin suggested the action as being chemical and caustic, referring to the action of blue rays as an analogy. Dr. Hume asked if there was any probability of this treatment being similarly effective in ulcerating internal growths. Dr. Percival suggested that the active agent might be the high frequency current which permeated along with the x-rays and to the vibrations of which no normal cell synchronised, it being therefore harmless to them and yet capable of killing certain organisms.—Dr. Beattie and Dr. Bolam showed cases of Diffuse Specific Aortitis; Primary Aortic Regurgitation.—Mr. W. G. Richardson brought forward a patient in whom Resection of Gut for Strangulated Hernia had been performed.—Dr. Martin showed (1) a Patent Meckel's Diverticulum (this specimen was removed from a child, aged three months); and (2) a man, aged 54 years, who exhibited a very extensive Nævus involving the lower lip, the cheek, the tongue, and the left faucial pillar and extending into the neck. The condition had existed since birth and it was considered too extensive to interfere with.—Mr. Morison brought forward Two Complicated Cases of Intussusception. The first was that of a miner, aged 62 years, who four months previously had severe colicky pains. The spasms came on several times a day, but sometimes a week elapsed between the attacks, which were accompanied by noisy rumblings and great constipation. The abdomen became swollen, especially in the right iliac fossa. During the last months the pains had been very severe and they had been accompanied by vomiting and sweating. The patient had lost weight and was very weak. On admission into hospital he was found to be an emaciated old man with a distended abdomen and presented a rounded mass in the cæcal region and a harder mass above and to the right of the umbilicus. Operation revealed a large ileo-cæcal intussusception extending as far as the centre of the transverse colon. After reduction a mass was felt in the lower end of the ileum about three inches from the cæcum. The involved portion of bowel was excised and the ends were united by direct suture. The patient made a good recovery. The specimen showed the condition to be a large polypus of the ileum which had produced the intussusception. Microscopically it proved to be a myxoma. In the second case a male, aged five years, had been 24 hours before admission suddenly seized with acute abdominal pain and vomiting. The pain was paroxysmal; blood was passed per rectum. The boy was in good condition and presented a sausage-shaped swelling in the left iliac region. On operation the intussusception of the lower ileum was found after reduction to have been produced by an inverted Meckel's diverticulum. The diverticulum was removed and the boy made a good recovery. The specimen showed the Meckel's diverticulum as it was removed turned inside out.

FOLKESTONE MEDICAL SOCIETY.—A meeting of this society was held on Oct. 4th at the Queen's Hotel by invitation of Mr. H. A. Powell.—Dr. J. E. G. Calverley and Dr. A. Gordon Wilson were elected members of the society. The report of the Library Committee was received and adopted.—Dr. T. Eastes read a paper on Clinical Errors. He drew attention to various difficulties and mistakes which he had met with in practice, such as cases of polypus uteri mistaken for pregnancy, distended bladder where the normal amount of urine appeared to have been passed, pancreatic cysts simulating abscess in the abdominal wall, and pregnancy diagnosed where it did not exist and being unexpectedly discovered where it had not been diagnosed. He insisted upon the importance of bearing in mind the possibility of pregnancy in all kinds of obscure abdominal swellings, especially when any abdominal section was contemplated, as otherwise serious consequences might arise. Various kinds of injuries were mentioned, especially those about the hip and shoulder, as being sources of many errors and difficulties. Two cases of impacted fracture of the neck of the femur which had become loosened after two or three days served to illustrate the importance of not speaking too positively about the prognosis or diagnosis in such cases until a certain interval had elapsed. Stress was laid upon the use of Bryant's line for diagnosis. The help given by x-ray shadow photography was mentioned, also the danger of the public being misled by the same. The difficulties met with in cases of rash were recognised, also the uncertainty of diagnosis at the commencement of a case of enteric fever. Laryngismus stridulus and whooping cough had been confused. The dangers arising from the similarity of diphtheria and follicular tonsillitis and the help derived from bacteriology were considered. Some cases of poisoning from drugs were described, the list including morphia, digitalis, Easton's syrup, carbolic acid, phosphorus, belladonna (severe symptoms from the use of a plaster seven and a half inches by four inches for a few hours), cocaine, turpentine, aconite, iodoform, copaiba, bromides, salicin, thyroid extract, and acetate of lead. In operations incision of the tumour was strongly advised in breast cases where there was any possible doubt as to the malignancy of the swelling. Two cases of injury to the uterus during forcible dilatation were mentioned, but in neither did any bad result seem to follow. Dr. Eastes concluded by saying that tales against another medical man's reputation coming from a patient who had just left that gentleman should be discredited. Probably the patient was still in that medical man's debt and had been requested to settle up and instead had called in a fresh medical attendant, to do the same again later.

LEICESTER MEDICAL SOCIETY.—The half-yearly business meeting of this society was held on Oct. 1st, Mr. H. J. Blakesley, the President, being in the chair. The President-elect was conducted to the chair by Mr. Blakesley.—A vote of thanks to the retiring honorary secretaries having been passed, Dr. Astley V. Clarke and Dr. R. W. W. Henry were elected to fill their places, the latter gentleman being in place of Mr. N. C. Ridley who resigned office. The following, with the officers, were elected to the Council: Dr. J. Peacock and Dr. J. Hunter, with Mr. Ridley and Mr. C. D. Nuttall.—The following motions were carried in silence:—

That this society records with much regret the death of Dr. John Headley Neale. His premature death at the age of 51 years is a great loss to the society and the medical profession of Leicester.

That this society records with great regret the sudden death of Dr. Julius St. Thomas Clarke, who was engaged for 40 years in medical practice in the town. He was a member of the society for 38 years, and a former president. He was held in high esteem among a large circle, and his death is a great loss to the society and to the medical profession of the town.

An ordinary meeting of the society was held on Oct. 4th, Dr. F. W. Bennett (President) being in the chair and 21 members being present. Mr. J. S. Sloane was elected a member. Dr. Bennett read a paper on Medicine and Legislation, a Forecast. He divided the subject into two parts: (1) methods to improve the existing race, and (2) methods to safeguard the future race. In the first part he discussed (*a*) the effect of dust on the atmosphere and its influence in lessening the intensity of light; (*b*) the advantages to be derived from medical inspection in schools; and (*c*) the importance of legislation in preventing the spread of tuberculosis by expectoration. In the second part Dr. Bennett discussed the following points: (*a*) examples of hereditary influence in disease; (*b*) the frequency of deaf-mutism; (*c*) the hereditary influence in the congenital cases; (*d*) the danger of marriage of the deaf; (*e*) the amount of deafness among the families of the deaf; (*f*) the amount of nerve defects in these families; (*g*) the frequency of mental defects; and (*h*) the hereditary factor in mental disease. He advocated legislative changes to prevent (*a*) intermarriage of deaf-mutes; (*b*) intermarriage of hearing people who belonged to families having more than one deaf-mute; (*c*) marriage of confirmed epileptics; (*d*) marriage of confirmed drunkards; (*e*) marriage of those who had once been insane, provided the family history showed a marked taint; and (*f*) marriage of those who had been more than once insane.—A vote of thanks to the President was carried, on the motion of Dr. F. M. Pope, seconded by Mr. G. C. Franklin.

PLAISTOW AND CANNING TOWN MEDICAL SOCIETY.—A meeting of this society was held at the Public Hall on Oct. 4th, Dr. W. C. Taylor being in the chair.—Some questions of a medico-political nature having been discussed a few interesting cases were exhibited by members.—Mr. J. Jordan Harvey showed: (1) A case of Gummatous Ulcer of the Upper Lip in a middle-aged man simulating Epithelioma; (2) a case of Irritable Ulcer of the Leg in an old man; and (3) a case of Congenital Heart Disease with Cyanosis of the Extremities and Webbing of the Fingers and Toes.—Dr. E. Hay showed a case of Mitral Incompetence with Hypertrophy of the Heart in a boy aged four years.—Dr. Leonard G. Guthrie then read a paper on the Treatment of Hemiplegia, which is published in full at page 1035 of our present issue.—A discussion followed in which most of the members present

took part and several questions were put to the lecturer.—Dr. Guthrie, in reply, said that purely motor aphasia might in some cases be improved by instruction on the "oral" system as used for the deaf and dumb. The vocabulary of a patient suffering from "verbal amnesia" had been somewhat increased by making him repeat the names of things over and over again. He (Dr. Guthrie) knew of no methods of improving "word deafness" and "word blindness." He doubted whether digitalis and other drugs were of service in cases of localised œdema—massage and bandaging were more efficacious. Passive movements of the limbs should be employed from the first. Age and the nature of the primary disease were no disqualifications. Treatment of infantile hemiplegia did not differ from that of adults. Cases in which the limbs remained flaccid instead of spastic were generally functional in nature.—A hearty vote of thanks to Dr. Guthrie was then carried and the meeting adjourned.

BRITISH ORTHOPÆDIC SOCIETY.—A meeting of this society was held at the Royal Orthopædic Hospital on Oct. 12th.—Mr. H. A. Reeves, who was in the chair, showed: (1) A case of Congenital Absence of Both Fibulæ; (2) Skiagrams of a Similar Deformity in an infant, with Fusion of the Great Toe and the First, in relation to their Phalanges; (3) a Photograph and Skiagram of a case of a woman, aged 42 years, with Lateral Deviation Outwards of all the Fingers at the First Inter-phalangeal Joints (cause unknown); (4) a case of a girl, aged 14 years, with Extreme Valgus of Both Feet and Great Wasting of the Leg Muscles with Partial Dislocation of both Patellæ; and (5) Photographs of Contraction of all Fingers of Both Hands (like Dupuytren's) in an infant.—Mr. Noble Smith showed: (1) Photographs and Skiagrams of a Child, six years of age, with Great Attenuation of the Muscles and Bones of the Leg, with well-marked Anterior Curves; (2) Photographs and Skiagrams of a Rachitic Case, the patient being six years of age, with Peculiar Formation of the Lower Ends of the Femora; and (3) an Engraving of Carcinoma of the Spine secondary to Carcinoma of the Left Femur.—Mr. Muirhead Little read an interesting paper on the Treatment of Lateral Curvature of the Spine.—A very instructive discussion followed in which the following members took part: Mr. Reeves, Mr. C. B. Keetley, Dr. Percy Lewis, Mr. Noble Smith, and Mr. Chisholm Williams.

BRITISH GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on Oct. 10th, Dr. J. A. Mansell Moullin being in the chair.—Dr. F. A. Purcell showed a Cystic Sarcoma of the Right Ovary removed by Abdominal Cœliotomy from a single woman, aged 52 years. The specimen weighed eight pounds. Its circumference at its greatest diameter measured 26½ inches and at its least 18 inches. The patient had lost nothing since the menopause which had taken place six years previously. She had suffered considerable abdominal pain for some time before the swelling first became evident, five or six years before. The uterus, two and a half inches in length, was separate from the tumour. A considerable amount of ascitic fluid was present. The patient made an uninterrupted recovery.—Dr. H. Macnaughton-Jones read a paper entitled "Gynæcological Cases" which is published in full at p. 1031 of our present issue.—Dr. W. Travers read a short communication on a case of a Fibroid Tumour simulating Appendicitis and causing Intestinal Obstruction. The tumour was removed. Some months had elapsed since the operation and the patient now performed her duties without discomfort and any constipation was easily overcome.—A discussion took place upon Dr. Travers's communication and upon the specimens shown.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—The first meeting of the forty-sixth session of this society was held at the Royal Kent Dispensary, Greenwich, on Oct. 4th, Dr. G. Herschell, Vice-President, being in the chair.—The treasurer's accounts and the annual report having been read and adopted and several new members having been elected the following were chosen as officers and council for the ensuing year:—President: Dr. Thomas C. Meggison. Vice-Presidents: Dr. Herschell and Dr. Robert E. Scholefield. Council: Mr. F. Septimus Barnett, Mr. Leonard A. Bidwell, Mr. Charles J. Heath, Mr. Arthur E. Joscelyne, Mr. William Henry Payne, Mr. Chisholm Williams, and Dr. H. Bowen Williams. Treasurer: Mr. John P. Purvis. Secretary: Dr. John P. Henry. Librarian: Dr. F. S. Toogood.—The following cases were then shown. Dr. Toogood: (1) A case of Syringomyelia; (2) a case of Paralysis Agitans; and (3) a case of Removal of the Right Kidney for Hydronephrosis.—Dr. Scholefield: (1) A case of Lupus treated by the X Rays; (2) a case of Pigmented Symmetrical Dermatitis on Both Cheeks; and (3) a case of Cerebral Tumour.—Dr. Joscelyne: A case of Rupia with a Negative History of Syphilis.

YORK MEDICAL SOCIETY.—The inaugural meeting of the session of this society was held on Oct. 9th, when Dr. G. H. Savage of Guy's Hospital, London, delivered an address on the Influence of Surroundings in the Production of Mental Disorder before an audience of about 300 ladies and gentlemen. The address created the very greatest interest.—The annual dinner of the society took place the same evening, when 44 members and friends were present, including the Lord Mayor, the Dean of York, Dr. Savage, Colonel Fielden, Colonel Mapleton, R.A.M.C., Colonel Haynes, Professor Trevelyan, Mr. Lawford Knaggs, Dr. C. Powell White (Leeds), and Dr. A. C. F. Rabagliati (Bradford). Dr. J. H. Buchanan, J.P. (Thirsk), President of the society, occupied the chair. Dr. Bedford Pierce, ex-President, proposed the toast of the evening, "The Orator," which was humorously responded to by Dr. Savage.—The office-bearers of the society for the ensuing session have been recently elected as follows:—President: Dr. Buchanan. Honorary librarian: Dr. J. Ramsay. Honorary curator: Dr. D. S. Long. Honorary secretaries: Dr. Edmund M. Smith and Dr. G. A. Auden. Other members of the Council: Dr. Pierce, Mr. W. Draper, Mr. W. H. Jalland, Mr. H. C. Shann, and Mr. J. H. Gostling.

CARDIFF MEDICAL SOCIETY.—The opening meeting of this society was held at the society's rooms on Oct. 3rd, Dr. D. R. Paterson, the President, being in the chair.—The President showed a case of Cervical Pachymeningitis.—Mr. William Sheen showed a patient with Hypertrophy of one Side of the Head and Face in which all the structures—bones and soft parts—participated. Two large flaps of skin had been removed with considerable resulting improvement in the patient's appearance.—Mr. Sheen also showed a Kidney on which Nephrotomy had been performed, an abscess being opened. Subsequently the kidney was removed and a second abscess was found to be present in the cortex, in the wall of which tubercle bacilli were found.—The President read an address on "Some Defects in our Medico-Legal System."—On the motion of the President, seconded by Dr. T. Wallace, the society heartily congratulated its senior secretary, Mr. Lynn Thomas, on being made a Companion of the Bath as a reward for his services with the Welsh Hospital in South Africa.

MANCHESTER MEDICAL SOCIETY.—The opening meeting of this society was held on Oct. 2nd.—Professor A. H. Young, the President, gave an account of the Structure of the Ovum and described in detail the phenomena of the karyokinetic division of cells. The different phases were illustrated as they occurred in the equal division of the ovum which followed fertilisation and constituted the process of segmentation. They were also illustrated by the process of unequal division of the ovum which occurred during its maturation and resulted in the formation of the polar bodies. The phenomena observable during maturation, fertilisation, and segmentation were further illustrated, as they occurred in echinus esculentus, by a series of lantern slides for which Professor Young expressed his indebtedness to Dr. T. Bryce of Glasgow.

HULL MEDICAL SOCIETY.—The thirteenth annual meeting was held in the Library Room of the society on Oct. 11th, Mr. T. M. Evans, the President, being in the chair.—After some formal business had been transacted the meeting then proceeded to the election of office-bearers with the following result:—President: Mr. R. H. B. Nicholson. Vice-Presidents: Mr. T. M. Evans and Dr. Edward Harrison. Secretary: Dr. James MacNidder. Librarian: Dr. Robert Grieve. Members of Council: Dr. Thomas Cameron, Dr. A. G. Francis, Dr. E. M. Hainworth, Mr. Edmund H. Howlett, Dr. David Lowson, Dr. Alfred Parkin, Dr. James L. Waters, and Dr. John Wyllie.

WATER-SUPPLY OF BOVEY TRACEY.—At the meeting of the Newton Abbot (Devon) Rural District Council held on Oct. 9th it was decided to apply to the Local Government Board for sanction to borrow £7000 for the purposes of a water-supply for Bovey Tracey. It is hoped that the new works will be ready for use next summer.

Reviews and Notices of Books.

Diseases of the Thyroid Gland and their Surgical Treatment. By JAMES BERRY, B.S. Lond., F.R.C.S. Eng., Surgeon to the Royal Free Hospital, and Lecturer on Surgery at the London (Royal Free Hospital) School of Medicine for Women; Surgeon to the Alexandra Hospital for Hip Disease. London: J. & A. Churchill. 1901. 8vo, pp. 384. Price 14*s*.

ENLARGEMENT of the thyroid gland has from a very early date attracted the notice of physicians and others, and Greek and Latin writers frequently refer to this curious deformity, but it is only within comparatively recent years that the surgeon has been called upon to treat goitre with any frequency. It can hardly be said that England is a goitrous country, for there are many other parts of the world where affections of the thyroid gland are vastly more prevalent than in Great Britain. Yet when we consider the total population of these isles we need feel no surprise that the total number of cases in which the thyroid gland is diseased is very large, so that there is ample material in this country for the foundation of a very wide experience. The author of the work before us has devoted special attention to this subject for many years. In 1886 Mr. Berry was awarded the Jacksonian Prize by the Council of the Royal College of Surgeons of England for his essay on the Diseases of the Thyroid Gland, and in 1891 he delivered the Hunterian Lectures at the same institution on the same subject. On the essay and the lectures this work has been based, but the experience gained in the years which have intervened has naturally modified somewhat the views first expressed.

Many mistakes in reference to the thyroid gland have been made because of an insufficient acquaintance with the variations in the gland, which from their frequency may be called normal. The presence of accessory thyroids is very common, and their existence is of great importance from their connexion with the now almost discarded operation of complete thyroidectomy, a chapter on the anatomy of the gland is therefore of value. The anatomical relations of the gland and its vascular supply are of exceeding moment in operations on it, for the proximity of the recurrent laryngeal nerve and the large number and size of the thyroid vessels may easily lead to serious danger if the operator is not well acquainted with the anatomy of the normal gland.

But of all the diseases of the thyroid gland goitre is the most important. It is probable that to account for the origin of no other disease have so many theories been invented as for goitre, and yet it may be said that not one of them furnishes a satisfactory explanation. Most goitres in this country are probably of the endemic variety and it is to the investigation of the etiology of this form that chief attention has been directed. The author passes in review all the theories which have hitherto been brought forward. He shows that climate has little or nothing to do with the origin of the disease, for goitre is found both in the cold regions of Northern Siberia and in the territories of the Hudson's Bay Company on the one hand, and also in the Tropics on the other. The amount of rainfall and density of the atmosphere are equally unsatisfactory as etiological factors. The physical configuration of the country does not suffice to explain the origin of goitre; though it is true that the districts in which goitre prevails are nearly all hilly, yet many mountain ranges occur, such as those in Scotland, in which goitre is almost unknown. The want of air and of sunshine in some of the Swiss valleys has also been advanced as a cause, but many of the deep valleys of Norway are equally dark and gloomy and yet goitre is in that country very rarely seen. When we come to the geological structure of the soil we appear to be on surer ground, and Mr. Berry considers that the true explanation of the association of goitre with hills is to be found, not in the configuration of the country, but in its geological structure. The nature of the underlying strata has an enormous influence on the nature of the mineral constituents of the drinking water of a district. The author gives us a very full account of the relation of goitrous districts to their geological structure, and as an outcome of his investigations he is inclined to believe that there is a real connexion between calcareous rocks and goitre. That the drinking-water of a district in which goitre occurs is responsible for the occurrence of the disease there seems but little doubt, for some epidemics of goitre have occurred in regiments which have been quartered in some particular village, and in some cases a village where goitre was formerly prevalent has changed its water-supply and goitre has ceased to occur. It may, then, be regarded as fairly proved that drinking-water is the channel by which the real cause of the disease invades the body. It becomes a much more difficult problem to determine what constituent in the water is responsible for the disease. Since the mere degree of hardness of the water appears to bear no relation to the frequency of goitre it is clear that calcium and magnesium salts do not give rise to the disease. Iron has been blamed, but on very little evidence. Mr. Berry quotes a series of experiments which he made some years ago. He gave to some guinea-pigs various salts of calcium, magnesium, potassium, sodium, and iron; yet though the experiments lasted nine months, no goitre was produced. Mr. Berry does not mention copper as a possible cause of the disease, although there seem to be several arguments in its favour. Of late micro-organisms have been credited with the power of causing goitre, but the proof is weak. Physical exertion appears to have little or nothing to do with the production of the disease, and heredity is at least as doubtful, though, as in the case of many other diseases, goitre occurs in families because all the members of the family are exposed to the same cause.

Of all the symptoms produced by an enlarged thyroid gland the most common and important is certainly dyspnœa, and this is produced by direct pressure on the trachea, for, as Mr. Berry points out, the rarity of dysphonia is clear evidence that the dyspnœa is not produced by pressure on the recurrent laryngeal nerves. A table is given containing notes of 34 cases in which fatal asphyxia was caused by pressure of a goitre, and from this table it is seen that although goitre is much more common in women than in men fatal dyspnœa occurred equally frequently in both sexes. A further important point deduced from this table is that in most of the cases the patients were young adults under 20 years of age—in fact, only seven were over that age. Further, unilateral goitres do not often cause fatal dyspnœa, and some of the most dangerous tumours are those which lie behind the sternum.

Naturally the most important portion of the book is devoted to a consideration of the treatment of goitre. For simple cases in which no operation is required the author advises that the patient should, if possible, remove to a district where the disease is not prevalent. The water suspected of causing the goitre should be filtered and boiled before being drunk, and if the patient is young and the goitre is small much benefit may be derived from the adoption of these measures. Of all internal remedies iodine and its preparations hold the first place, and in this connexion it is interesting to remember that nearly 2000 years ago burnt sponge, which contains iodine, was employed for goitre. Mr. Berry prescribes for ordinary cases of parenchymatous goitre five minims of tincture of iodine with four or five grains of iodide of potassium, the doses being gradually increased until the patient is taking three or four times as much. If the iodine in full doses does not produce a marked diminution in the size of the

gland in two or three weeks the author does not think it likely that it will do any good. If iodism is produced or the digestion is upset the administration of iodine should be diminished or stopped. With regard to local applications, Mr. Berry has not met with much success with the application of iodine. Tapping and injection of a goitre are condemned by the author who tells us that he considers that the advantages are incommensurate with the risks. Ligature of the thyroid arteries and exothyropexy do not commend themselves to Mr. Berry. As to division of the isthmus we are told that it is an operation not to be recommended except, perhaps, in certain exceptional cases. The two chief operations which are required in goitre are extirpation of a part of the thyroid and enucleation of a tumour from the interior of the gland. In the great majority of cases partial extirpation is the operation performed and the whole procedure is very carefully described and given in great detail. Mr. Berry tells us that if there is little or no dyspnœa or stridor there can be no objection to the administration of a general anæsthetic, but if there is any probability that serious dyspnœa may occur during the course of the operation then it is better to dispense with a general anæsthetic and to do the operation under cocaine or eucaine. A general anæsthetic is especially dangerous if severe dyspnœa is present at the time of operation, for under such circumstances sudden death has occurred even before the operation has commenced. We need not follow the author through the whole operation; he discusses fully the various steps, and the description shows that it is written by one who knows his subject well.

An interesting chapter is added by Mr. Berry on the Results of Operations; and here it is shown that before 1851 the mortality was 31 per cent., from 1851 to 1876 it was 20 per cent., and from 1877 to 1882 it was 14·6 per cent. The mortality at present is certainly under 3 per cent., and in skilled hands it is probably less than 1 per cent. In Mr. Berry's last 80 cases there has been no death or serious complication of any kind. An appendix gives notes of 100 consecutive cases of removal of goitre by operation performed by the author since February, 1894. The book contains more than 100 illustrations, the majority of which represent patients before and after operation.

We may conclude by expressing the opinion that the book is one of the most important works in English on the subject with which it deals; it is clear, exact, and concise, and for many years it will be read and appreciated as a valuable account of the surgery of the thyroid gland.

Handbook of Physiology. By W. D. HALLIBURTON, M.D. Lond., F.R.S., Professor of Physiology, King's College, London. Fourth Edition, being the Seventeenth Edition of Kirkes' Physiology. With upwards of 680 Illustrations, including some Coloured Plates. London: John Murray. 1901. 8vo. Pp. 888. Price 14s.

THE frequency with which this work has been re-edited is sufficient evidence of its adaptation to the wants of the student. Originally founded on the lectures of Sir James Paget at St. Bartholomew's Hospital, delivered in 1843 and succeeding years, by Dr. Kirkes, it at once took a prominent place amongst the, at that time, rare works on physiology. Its only competitor was the excellent manual of Dr. Carpenter. Both works, by the introduction of histological details, then quite a novel feature, attracted attention and they became the recognised text-books of the schools. There was, indeed, a treatise of wider scope than either of these—Dr. Baly's translation of Müller's Physiology—but it was too profound for the majority of students and was, we imagine, consulted by teachers rather than by the taught. Those who had the privilege of listening to Sir James Paget's lectures could read his language in many pages of the "Handbook" though they could not feel the charm of his delivery or experience the pleasure of listening to his exposition of facts and theories that were not to be found in any book published in English at that time. After several editions had been published by Dr. Kirkes the task of revising it and bringing it up to date was successfully undertaken by the late Mr. Morrant Baker and by Dr. Vincent Harris. A year or two ago, the demand for the work being still considerable, Mr. Murray wisely submitted it to the consideration of Professor W. D. Halliburton to determine whether it could be made a reflex of the actual condition of physiology. Professor Halliburton undertook the task and by striking out much that had become effete and by adding still more rendered necessary by the progress of physiology produced one of the best manuals for the student which we possess. So many and so considerable have been the alterations made by Professor Halliburton in the work that very little of the original now remains, and Mr. Murray in a publisher's note prefixed to the text states that in consequence of its high reputation and wide popularity he has determined to drop the time-honoured name of "Kirkes" and to substitute for it that of the real author of the volume, Professor Halliburton. Mr. Murray incidentally notices that a pirated edition has been for some years past in circulation in the United States for the contents of which he does not feel himself or the author responsible. Professor Halliburton states in his preface that he has once more subjected the book to a thorough revision whilst trying to keep in mind that the book is a student's text-book and that consequently unnecessary detail was to be avoided. New sections have been introduced on the significance of Nissl's granules, on Waller's work on the Electrical Currents of the Eyeball, on Cannon's researches in connexion with Stomach Movements, and on Waymouth Reid's Investigation of the Processes of Absorption. Many other sections have been extended and modified, though the size of the work has not been enlarged owing to the elision of antiquated matter. Several new woodcuts have been introduced, but some of the old ones want renovation, notably the chromo-lithograph representing blood and other spectra, which is very coarse, and Figs. 146, 268, and 344. These and several others contrast unfavourably with the beautiful drawings in various French and German treatises. Considering the importance of the sympathetic system of nerves a section might be added to bring the facts distributed through the volume to a focus. The sections dealing with the Chemistry of the Body are, as might be expected, both full and accurate. The book is an eminently trustworthy one and will prove, whether read alone or in conjunction with others, a valuable foundation for, and introduction to, the large treatises on physiology.

Die Behandlung der Entzündlichen Erkrankungen der Gebärmutter-Adnexe mit dem galvanischen und dem faradischen Strome (The Treatment of Inflammatory Affections of the Uterine Appendages with the Galvanic and Faradaic Current). By Dr. JOHANN KALABIN. With 3 Illustrations in the text. Jena: Gustav Fischer. 1901. 8vo. Pp. 230. Price 6 marks.

THE author has treated a considerable number of cases of salpingo-oöphoritis, both simple and gonorrhœal, and chronic inflammation of the ovaries by the galvanic and faradaic currents. He has embodied his own results as well as the results of his colleagues and those recorded by others in this *brochure*. Personally, in cases of salpingo-oöphoritis he employs the galvanic current. The positive electrode is placed in the vaginal fornix corresponding to the diseased tube, or in either fornix alternately, and the negative electrode, the clay one of Apostoli, upon the abdomen. The strength of the current varies from 10 to 50 milliampères, and the number of the sittings, which

last from seven to 15 minutes, are from 15 to 30. The patient, after a rest of about a quarter of an hour, is allowed to return home and to resume her normal occupapations. The author combines with this treatment the use of daily hot vaginal douches. If necessary the patient returns at the end of six months and if it be required is subjected to a further course of from five to 15 sittings. In the treatment of chronic inflammation of the ovary Dr. Kalabin uses the faradaic current. The one electrode is placed in the vaginal fornix and the other, a copper plate covered with flannel, upon the abdomen. As the result of his own experiences and of the results obtained by others the author comes to the following conclusions. The treatment of salpingitis and salpingo-oöphoritis with the constant current often leads to a complete or almost complete cure. The presence of a pyosalpinx contraindicates such treatment. Of 24 cases of pyosalpinx treated in this way in five the condition was rendered worse and in one death ensued. The bleeding accompanying salpingo-oöphoritis tends to cease as a result of vaginal galvanisation with a current of 30 milliampères. The cessation of the bleeding does not depend upon cauterisation of the mucous membrane of the uterus. Salpingitis and salpingo-oöphoritis complicated by fibromyomata of the uterus or broad ligament should not be submitted to electrical treatment. In many cases of oöphoritis, more than half of the cases collected, the use of the galvanic or faradaic current led to complete recovery. The use of the constant current for the treatment of salpingitis and salpingo-oöphoritis due to the gonococcus leads in many cases (11 of the 42 recorded) to a good result. The exact part played by the electrical treatment in these cases is difficult to determine. We are, however, even yet only on the threshold of our knowledge with regard to the use of electricity in these and many similar conditions, and the author's results are therefore of considerable interest.

The Mental Functions of the Brain. By BERNARD HOLLÄNDER, M.D. Freiburg in Baden, M.R.C.S. Eng., L.R.C.P. Lond. London: Grant Richards. 1901. Royal 8vo. Pp. 512. with several Plates. Price 21*s.* net.

IN this work an attempt is made by the author in the direction of the revival of phrenology and the "clearing up of the mystery of the fundamental psychical functions and their localisation in the brain." Dr. Holländer, moreover, claims that it is the "first work on the subject since the dawn of modern scientific research," and seeks to base his views on scientific data, clinical, pathological, and comparative. The work is thus a pretentious one and its claims are of an exceptional character.

After a discursive sketch of the present state of mental science the author proceeds to deal with the pathology of melancholia. Starting from observations attributed to Jensen and Tigges that the frontal lobes of the brain are not affected by loss of weight in melancholia, in contrast to general paralysis, a localisation is sought for melancholia in the parietal lobe, or, to be more exact, in the angular and supra-marginal gyri. Indeed, this "discovery" is said to have been foreshadowed by Gall, the founder of phrenology, in the beginning of the nineteenth century. A number of cases culled from various sources and of varying degrees of value are quoted to support this conclusion, and in some of these the co-existence of word-blindness is noted. Many of the facts quoted are, however, open to other interpretations, and the author's conclusions at the end of the chapter are by no means established, especially his thesis that the "emotion of fear" is located in these gyri. In the following chapter the localisation of violent mania regarded as a morbid form of the emotion of anger is attempted. Gall's description of the brains of homicides is acknowledged as the basis for this localisation, and several post-mortem records are cited. The following is a typical instance of the author's method of stating facts and deducing conclusions. "Male, aged 19, admitted into the asylum suffering from *epileptic mania*. He was described as very violent before and after the attack. On admission he was found to be a muscular youth. ..... Mentally he was irritable and excitable, took offence at trifles. Post mortem.—*Tumour found at the base of the brain*" in the left lenticular nucleus. This case is cited as one of the "proofs" that *mania furiosa* is located in the temporal lobe. A similar loose handling of data is observable throughout the book and not only detracts greatly from its value but weakens our belief in the soundness of the author's judgment generally. A similar verdict must be recorded of the connexion alleged by the author to exist between irascible mania and otorrhœa with earache. So, too, much of the neuro-pathology quoted by the writer is antique and obsolete. For instance, the old and abandoned view that epilepsy is due to sclerosis of the cornu ammonis and to asymmetrical enlargement of the lateral ventricle is made the foundation for further localisation, and the conclusions (nine in number) recorded on pages 181 and 182 are rendered doubtful. Delusional insanity with ideas of persecution is next located in the posterior temporal region, and kleptomania in the anterior temporal region in accordance with an observation of Gall that incorrigible thieves had a prominence in the corresponding part of the skull. When the subject of aphasia in its various forms is touched upon the clinical material is more satisfactory and an attempt is made with great dexterity to read into the conclusions of clinical neurology a phrenological theory. Among other curiosities we find "veneration" localised at the crown of the head (the site of the anterior fontanelle), while sexual desire is located in the lateral lobes of the cerebellum.

LIBRARY TABLE.

Atlas and Epitome of Labour and Operative Obstetrics. By Dr. OSKAR SCHAEFFER. Authorised translation from the fifth German revised edition. Edited by J. CLIFTON EDGAR, M.D. With 14 Lithographic Plates in colours and 139 other Illustrations. Pp. 110 and plates. London and Philadelphia: W. B. Saunders and Co. 1901. Price 9*s.* net.—*Anatomical Atlas of Obstetrics.* By Dr. OSKAR SCHAEFFER. Authorised translation by J. CLIFTON EDGAR, M.D. With 122 Figures in 56 Lithographic Plates, and 38 other Illustrations. Pp. 315. London and Philadelphia: W. B. Saunders and Co. 1901. Price 13*s.* net.—Dr. Clifton Edgar has made an authorised translation from the fifth revised German edition of the Atlas and Epitome of Labor and from the second revised German edition of the Anatomical Atlas of Obstetrics. The two German editions were noticed by us in THE LANCET of Oct. 28th, 1899 (p. 1173), and June 23rd, 1900 (p. 1807). The translator has made no additions to the text and has allowed the classification of presentations, positions, and obstetric operations to stand as in the original; in all statements of the French weights and measures, however, the English equivalents have been given. As we have already said, the amount of information contained in these two volumes is considerable, and for the English student or practitioner who wishes to become familiar with current German views and teaching in obstetric medicine the translations will prove of service. The translator appears to have done his work well and many of the figures are of value and well reproduced.

Banks and their Customers: a Practical Guide for all who keep Banking Accounts, from the Customer's Point of View. By HENRY WARREN. Fifth edition. London: Effingham Wilson, Royal Exchange, E.C. 1901. Pp. 77 Price 1*s.*—The author writes as one who is evidently "behind the scenes," and it is somewhat appalling to

the majority of us, who look upon our bankers as highly respectable old gentlemen and entirely above suspicion, to learn that they are all more or less opportunist thieves. We trust the author's views are exaggerated in this respect. Mr. Warren also does not hesitate to give utterance to his opinion that the reason why bank clerks do not "oftener make a bolt with the cash or indulge in extensive forgeries" is that "they have not got the pluck." Alas for the boasted civilisation of the twentieth century and the teaching of the various Christian bodies that the reason why a man does not rob his employers is not the restraining influence of duty or of religion, but want of pluck! We are the better for the fewer exhibitions of such pluck. Apart from this, the book contains some very useful information.

JOURNALS AND MAGAZINES.

Revue d'Hygiène et de Police Sanitaire. Vol. XXI No. 9, Sept. 20th, 1901. Paris: Masson et Cie.—In this number Professor Fournier asks the somewhat difficult question whether or not the students of the higher classes in schools should be initiated into the dangers of venereal diseases. Professor Fournier answers the question in the affirmative and he points out that out of 10,000 cases of syphilis 822, or 8·22 per cent., contracted the disease before the twentieth year—i.e., from 14 to 19 years of age. Similarly he shows, when dealing with severe tertiary manifestations, what a large proportion of such cases contracted their primary infection before the twentieth year. Professor Fournier holds the view that boys who are budding into manhood should be told the dangers of venereal disease and warned how widely distributed such diseases are among women practising either open or clandestine prostitution. There are two other original communications in this number: one by Dr. Berthier upon Rational Boots and the other by Dr. Raynaud on the International Sanitary Council of Morocco; but the greater part of the volume is taken up with the doings of the British Congress on Tuberculosis.

Children's Ailments and How to Treat Them.—The Home Series. Edited by FLORENCE WHITE. London: Grant Richards. Pp. 100 Price 2*d.*—This little book is as excellent as its predecessor, "Home Nursing," which we had occasion to notice very favourably. Intended for the guidance especially of those to whom medical advice may be difficult of access, through pecuniary or other reasons, the book gives sound practical directions in just those matters where an uninformed mother may work so much unintentional harm. Care and cleanliness in the feeding and general surroundings of infants, simplicity of life, abundance of fresh air and natural exercise are among the things the importance of which is demonstrated. Other chapters deal with common accidents and ailments of children in a simple and practical manner, likely to render the nurse and mother acquainted with these instructions less helpless if alone and a more useful assistant to the medical man than she would otherwise probably be.

WEST OF ENGLAND EYE INFIRMARY, EXETER.—The new West of England Eye Infirmary was formally opened by Lady Clinton on Oct. 4th. The plans of the building provide for a structure with wings on either side of the central block, but at present only the eastern and central blocks are complete, the remaining wing being delayed through want of funds. The sections completed have been erected at a cost of £18,000, towards which £12,000 have been received, so that £6000 have still to be raised. The institution is fitted up in the most approved manner and is lighted by electricity. Accommodation is provided for 50 in-patients; when the remaining wing is completed this number will be increased to 85. At present the new structure is connected by a covered way with the old infirmary, the second oldest eye infirmary in the kingdom, which will continue in use until the additional wing is ready.

Analytical Records
FROM
THE LANCET LABORATORY.

"PHOS. CO." BAKING POWDER.
(THE "PHOS. CO." MANUFACTURING COMPANY, LIMITED, 91A, CHEAPSIDE, LIVERPOOL.)

IT is satisfactory that the Food and Drugs Act of 1899 includes baking powder as an article of food in its provisions, because injurious ingredients have been shown to be employed in baking powders, chiefly as substitutes for tartaric acid. Alum is well known as such an objectionable ingredient. So-called superphosphate or acid phosphate of lime has been used for a similar purpose. Providing that the superphosphate is pure and free from arsenic, which is not usually the case, little objection can be raised against its use considering the small quantity required for the efficient aeration of bread or pastry. Sulphate of lime, however, is an inevitable and considerable constituent of "superphosphate," and in some cases its presence in bread would be open to objection. But the quantity present in the loaf would be small. The baking powder under examination differs from most powders in containing an acid salt which by its interaction on carbonate of soda not only sets free carbonic acid gas but forms also a sodium salt which is a useful dietetic constituent. The powder on moistening effervesces briskly and its use in bread produces a loaf of excellent and uniform texture and of good colour. We could find no objectionable constituents in the powder. Its composition has been well thought out, so that it is not only useful for raising bread but increases its food value by augmenting the phosphatic constituents.

LIQUEUR SCOTCH WHISKY.
(MARSHALL, MCEWEN, AND CO., 146, ST. VINCENT-STREET, GLASGOW. LONDON OFFICE, 31, KING WILLIAM-STREET, E.C.)

This is an excellent and mature spirit, free from excessive extractives and without any appreciable degree of acidity. Analysis showed the following results: alcohol, by weight 39·80 per cent., by volume 47·13 per cent., equal to proof spirit 82·59 per cent.; extractives, 0·15 per cent.; acidity reckoned as acetic acid, 0·039 per cent.; and mineral matter, *nil.* The residue obtained on extraction by ether possessed the characteristic smell of a sherry cask. The flavour is smooth and malty, though somewhat sweet. The spirit gave no evidence of the presence of higher or injurious alcohols or of other raw products of which furfural is the type.

MELLIN'S FOOD CHOCOLATE.
(MELLIN'S FOOD, LIMITED, STAFFORD-STREET, PECKHAM, LONDON, S.E.

This chocolate contains an addition of the well-known Mellin's food and yields results on analysis in accordance with this description. It is of excellent flavour and evidently a chocolate of high quality is used for the purpose. Analysis showed, however, only a comparatively small proportion of proteid, the amount being 6·55 per cent. Carbohydrates were present in an easily digestible form and the mineral matter amounted to 2·62 per cent., consisting almost entirely of phosphates. The chocolate is a very agreeable food.

COOYMAN'S LIQUEUR ADVOCAAT.
(A. WEBSTER AND CO., LIMITED, 3A, BASINGHALL-AVENUE, COLEMAN-STREET, LONDON, E.C.)

This "liqueur" is made in Holland and, unlike most liqueurs, is a powerful restorative and food. It consists essentially of an emulsion of the yelk of egg with spirit, aromatics being added to give a pleasing flavour. Our analysis gave the following results: solid matters, 27·48 per cent.; mineral matter, 0·22 per cent.; water, 49·57 per cent.; alcohol, by weight 22·85 per cent., by volume 27·86 per cent., equal to proof spirit 48·82 per cent. The mineral matter contained, as might be expected, phosphates in abundance. Evidence of the presence of organic sulphur was distinctly gained. The preparation has an agreeable aromatic flavour and, considering its composition, is undoubtedly stimulant and restorative.

THE LANCET.

LONDON: SATURDAY, OCTOBER 19, 1901.

Hoch! Professor Virchow.

ON Saturday last an anniversary was celebrated in Berlin which has impressed the whole civilised world, and, in particular, has caused all those sections of thinking persons who take an interest in science to reflect on the possibilities for good that lie in the brain of an individual worker. For the proceedings in Berlin, as will be seen from our report of them, testify in a remarkable manner to the admiration which the whole scientific world has for the vast and far-reaching character of Professor VIRCHOW'S pathological and anthropological work. Scientific men benefit their generation in different ways, just as men with powers of artistic achievement may do; but there is one rough difference very generally existent between the two classes. The artist has all life for his theme; the scientific man is, as a rule, a specialist in some department of life, which may be large or which may be small, but which is none the less a department. He does his work: probably this work overlaps the work of brother men of science who are applying themselves to the study of a second department of exact knowledge, and who in their turn overlap with their labours the labours being carried on in a third department. The world is especially fortunate if the outcome of such special endeavours can be made to fall under one great scheme; and of all the benefactors of civilisation the most practical is he who can not only detect the factors that are common to the separate results of individual endeavour, but who can systematise these results and interpret their true significance by the formulation of a general law. Such a man was DARWIN, such a man is LISTER, and such a man is VIRCHOW; and comparison can rightly be claimed for each of them with the poet or the painter. Professor VIRCHOW is one of the rare figures in the world's history of men who have been able to combine in their work the results of specialised endeavour with a poetically immense imagination. Just as great works of imagination—the really great picture, oratorio, or poem—deal with the elementary passions and appeal to us by senses that are common in greater or less degree to the whole world, so Professor VIRCHOW'S pathological work has been large and simple. Extraordinary application and insight may have gone to its accomplishment, but its meaning is clear and its value undoubted. Fifty years ago he laid the foundations of modern pathology by beginning a series of investigations which terminated in the enunciation of the doctrine of *omnis cellula e cellulâ*. Before his work at Würzburg University there was no working theory that would really account for the commonest pathological processes. It was imagined that a formative but structureless blastema was thrown out between injured and separated surfaces, and that, for some reason or other, this blastema was obliging enough to become tendinous where the injury was of tendon, muscular where it was of muscle, and so on. VIRCHOW perceived that the whole process had factors in common whatever the injury and whatever the tissue concerned; while his understanding refused to admit as satisfactory the theory of free-cell formation which amounted, in his opinion, to the doctrine of spontaneous generation. After much patient endeavour he demonstrated the fact that all living tissues were composed of cells and that the transforming and reparative processes which went on in those tissues were the results of changes in those cells.

He has himself put on record the circumstances in which his studies took the directions that have led to such great events, but those circumstances may well be repeated, especially as they bear out the view that only a man gifted with great powers of imagination could possibly have seen so far ahead, and so have been supported during his investigations by the expectation of important issues. It was towards the end of his academical studies, more than 50 years ago, that young VIRCHOW had to take up the work of assistant in the ophthalmic clinic of the Charité Hospital at Berlin.

"We had" (these are his words in the Huxley Lecture[1] delivered at Charing Cross Hospital in October, 1898) "severe cases of keratitis, but I saw in them no exudation. Numerous cataract operations were performed; the wounds were closed, but not by plastic exudation; this was absent from all corneal scars. Could this be explained by the circumstance that the cornea, apart from its circumference, is a non-vascular tissue? I then turned my attention to the non-vascular tissues; first to the articular cartilage, and behold, here also I found the greatest changes without the presence of exudation, or at any rate of plastic exudation. My experimental studies then extended to the walls of the larger arteries and then also in part to the veins, and they showed equally that they can undergo great changes without even a trace of exudation. Later investigations on endocarditis led to the same result, provided that parietal thrombi are not regarded as exudation. In all these cases and in every place we found changes in the tissue cells—active, such as multiplication of nuclei, or passive, such as fatty degeneration. Most of these processes were of the nature of proliferations." It will be seen that VIRCHOW at once grasped the significance of his observations: he saw by the power of his imagination whither they would carry him. The actual phenomena lay before the eyes of all, yet this young house-surgeon was the first to whom their true meaning was revealed. He saw that the theory of a plastic exudation was arbitrary and erroneous. He saw, to use his words again, "that there is no such thing as plastic exudation which is ever simply amorphous; the cells which have been found in it have not arisen there. It is proved in numberless places. The doctrine of the discontinuous origin of pathological new formations is set aside. Every such new formation presupposes tissue from which its cells arise, that is, its matrix. Pathology has been late in arriving at a knowledge of this correspondence, but I think it has acquired special value for biology in general. Proliferation is an active property of special cells but it cannot be performed by all cells alike. That in no way alters the fact that it can only be performed by cells. It is just as little a function of the entire organism, for this would then have to be unicellular. In this property lies the explanation of origin from a single egg, the wonderful process which comes to pass but once in the life of the animal. Once the tissues have arisen each cell of the tissue may, in respect of proliferation, be compared to an ovum; it brings forth a new progeny from which new tissue grows, this tissue bearing, as a rule, the stamp of its matrix; it is built on the maternal type."

[1] THE LANCET, Oct. 8th, 1898, p. 909.

As a result of Professor VIRCHOW'S demonstration of these pathological views it follows that the pathologist of to-day can no more conceive of organised structures exhibiting vital phenomena, whether the simplest or the most complex, without reference to the cell as a unit than we can conceive of the sun apart from light and heat. The biologist, the pathologist, and the chemist, their labours all combined, cannot solve the whole problem of existence, but thanks to Professor VIRCHOW'S labours—to his splendid imagination grafted upon his painstaking search for truth and his exact verification of detail—we can congratulate ourselves upon some progress. We can repeat with confidence another of his sayings, "that the future of medicine will be secured if the connexion between clinical practice and the facts of pathological anatomy and experimental pathology is maintained unbroken."

Professor VIRCHOW'S career as a politician would have made him a notable citizen of the great German empire apart from all the work by which he has rendered his name internationally famous; but it is not our place to make more than a passing comment upon this phase of his full life. He has been called an ardent reformer, but his views were what might have been expected from a sound and enlightened man of science. He desired to see his country developed for the better, he worked for the gradual replacing of what was ill, for the regular elimination of faults, and for the no less regular introduction of improvements. He displayed in imperial and municipal politics the qualities of foresight and accuracy that had rendered him famous in science, and won golden opinions as an economist and a practical sanitarian. No true medical man can ever be a party politician—the label under which he votes can never more than partly describe his creed; and Professor VIRCHOW, while he was a Radical in conservative opinion, was ousted from his seat in the Reichstag for a Berlin constituency by the Social Democrats. As a true medical man he knew that complicated ills can hardly ever be dealt with by one drastic operation: they require all-round treatment. At the same time he knew that to tinker in this direction or in that, in the desire to deal with symptoms, and to neglect an exhaustive search for a common cause of the symptoms is almost certainly to condemn the patient to death. Hence his political life has been no bed of roses. Probably he could not go fast enough or far enough to please some, while his zeal for reform was too hot to suit others. He has lived to see the development of the German Empire from a congeries of isolated kingdoms, unable to see that their common good demanded a common policy and a common head, into a strongly welded union. He had stormy passages with the great architect of that Empire, Prince BISMARCK, and on all occasions he stuck to his guns. He was as a politician the true man of science, believing that all proceedings on a false theory must lead to disaster. Political quackery was abhorrent to him, and where he thought a system wrong, whatever the eminence of its supporters, he was bold to speak his mind. It is not to be wondered at that the career of such a man has inspired his scientific brethren with the desire to do him honour upon his eightieth birthday. We share that desire. Hoch! Professor VIRCHOW.

The Reorganisation of the Royal Army Medical Corps.

THE report of the Committee on the Reorganisation of the Army Medical Services has, on the whole, met with a fierce fire of adverse criticism. It seems to be forgotten that that document is after all only a *report* embodying the recommendations of a committee, and it may be asked whether it is not somewhat premature to pronounce absolutely condemnatory judgment on a still immature scheme, about which there is yet so much to be learned? Might it not be well before entering upon a course threatening to arrest the growth and development of further efforts in this direction to wait until something more is known about the scheme and the intentions of the Government in regard to it?

There are two ways of dealing with the scheme at this stage of its career. One is to disregard any honest and well-intentioned attempt on the part of its framers to deal with a confessedly very difficult and complicated subject and to hail its advent by mercilessly setting about to find out all its flaws, actual or potential, thus threatening its existence *ab initio*. The other and more conciliatory method is to regard the aim and spirit of the scheme, as outlined, in a general, broad, and comprehensive manner, to credit its framers with honesty of endeavour and purpose if such be apparent on the face of it, and to defer the task of searching for all the blots and defects that might be discoverable in their proposals, until their exact effect and bearing are better known. By showing a disposition to consider frankly and favourably any *bonâ-fide* scheme of reorganisation a fair claim is set up that regard must be given to subsequent criticisms and objections. In the case of the long controversy that has been going on between the medical services and numerous Governments we have considered that it was in the interest of the medical profession as a whole and of the medical services in particular to take the latter course. It cannot be denied that the report of the Committee on the Reorganisation of the Army Medical Services, in addition to an increase in the pay of medical officers, contains some other good proposals and suggestions. If it contained nothing else than a suggestion as to the possible translation of the medical school from Netley to London and the provision of a military hospital in the metropolis, where medical officers would have unrivalled opportunities for seeing hospital work and for obtaining clinical instruction of the best and most varied kind, it would be a great step in the right direction and, as we believe, of great value to the medical service. We need not say that, having already advocated this measure, we quite concur in all that Sir WILLIAM MACCORMAC has recently said on the subject. As he pointed out, some institution is required similar to that of the Kaiser Wilhelm Institute of Berlin. It would have been easy enough to find a number of points in the report which lent themselves to criticism or about which misgivings would naturally arise, for some of them lie on the surface, but we thought that such criticism would follow naturally and smoothly upon detailed consideration of the scheme. As we have stated, the effect and working of some of

the recommendations must for a time partake of the nature of experiments, and these would probably lead to modifications, developments, and improvements being introduced for which we consider there is ample room left in the scheme. We have from the first regretted that Mr. BRODRICK did not nominate some army medical officer of high rank, experience, and recognised ability as a member of the Committee. It was unquestionably a grave omission. But in another direction the constitution of the Committee was carefully considered. It is plain that one of the great aims of Mr. BRODRICK and the Committee has been to bring the Army Medical Services into the closest relations with the medical profession in civil life. Several distinguished men in the civil branch of the profession, some of whom had had war experience in South Africa, and to all of whom the requirements of the profession might safely be entrusted, were nominated members, and took part in the proceedings, of the Committee. The report was signed by all the members, although two of their number have added exceptions—viz., Sir WILLIAM THOMSON and Professor ALEXANDER OGSTON.

We entertained from the first serious doubts as to the size and workability of the Advisory Board charged with its numerous functions, and we hold, as we have already stated, that the Director-General, who is to be its chairman, must have a seat on the Army Board. We have also indicated that the *chevaux de frise* of examinations and conditions set up by the report will have to be considerably modified; indeed, for our own part we should be prepared to see them removed, although some machinery must, of course, be provided for the efficacious testing of medical officers upon whom great responsibilities will devolve. In many other respects the recommendations of the Committee are susceptible of, and will assuredly have to undergo, alteration and improvement. Little or nothing is said in the report about service in India, presumably because nothing has yet been definitely settled between the Government in this country and that of India. There is, to our minds, no actual or implied finality about the report of the Committee. We are convinced that it is a scheme *honestly* put forward, and therefore we think that our professional brethren may well be invited to consider its merits as well as its shortcomings. Hastily to boycott it is to create an *impasse* at a most unfortunate juncture. Because the Army Medical Service has been badly treated in the past that is no reason why the scheme propounded by Mr. BRODRICK'S Committee should not receive the attention which in many respects it deserves.

Small-pox and Anti-vaccination.

HAWTHORNE wrote: "Nobody will use other people's experience, nor has any of his own till it is too late to use it." His conclusion might well have been founded upon study of the behaviour of those who now decry vaccination and who assume that its value as a prophylactic against small-pox has never been made the subject of proper inquiry. Mr. BERNARD SHAW, writing to the *Times*, tells us that vaccination has never been scientifically investigated because it has been assumed that the science involved is the science of therapeutics, and of this most medical men, and almost all vaccinationist and anti-vaccinationist controversialists are so ignorant that they do not know that such a science exists and assume statistics to be a natural faculty of man, like English political public speaking. "Anybody can prove," he says, "by the statistical methods used by the disputants, and even by our Royal Commissioners, that typhus fever has been extirpated by the introduction of hair-brushing by machinery, or that the alarming increase of child-mortality from measles and adult mortality from cancer is due to the spread of teetotalism, to the use of the telephone, to vaccination, or any other contemporary phenomenon you please." He therefore proposes that the London University should be invited to undertake a purely statistical investigation of the question and to publish the result.

We have referred at length to Mr. SHAW'S statement because it is illustrative of the carelessness which characterises the action of the would-be teachers of the public on a matter of such vital importance as their protection against small-pox. Mr. SHAW contends that only persons highly qualified in statistics deserve to be listened to on this subject and in the same letter he condemns in wholesale fashion the statistics which have hitherto been presented by those who have studied it. It is not easy to understand his position. He evidently feels no difficulty in claiming for himself that he is a competent judge of statistical validity while he denies to all others but highly qualified statisticians similar ability. With Mr. SHAW'S desire that absolutely sound statistical methods should be employed in determining whether vaccination protects against small-pox we are entirely in sympathy; but with his view that he is a competent critic of the methods which have been used we equally disagree. We presume that he does not claim for himself that specialised statistical knowledge which he deems to be necessary, but if he does, it is obvious that he has not studied the abundant statistical evidence which exists and which proves conclusively the value of vaccination. No one with the least knowledge of this evidence could have written the sentence which we have quoted, for this evidence is of a sort altogether different from that which exists in respect of other diseases. The evidence is supplied by every epidemic of small-pox which prevails, and its effects upon two classes of persons living under circumstances which expose them to small-pox infection, the one the vaccinated class, the other the unvaccinated class. Comparison of the two classes may be made in respect of liability to attack, and among those who are attacked in respect of liability to death. The evidence is not limited to one town or to one country. It is a universal experience which is demonstrated in every community and every small-pox hospital at the times of epidemic.

The London School Board on Oct. 10th had before them figures based upon a comparison of the incidence of attack upon the vaccinated and the unvaccinated classes; and while Mr. GRAHAM WALLAS found reason for thinking that during the last 11 years in London small-pox had not manifested any greater tendency to attack the unvaccinated class Sir CHARLES ELLIOTT, using, he said, the same data, came to opposite conclusions. Mr. WALLAS, however, had assumed

that only 75 per cent. of the general population were vaccinated and he thought that this proportion was likely to be correct from the report as to the number of children who had escaped vaccination. It is here that he has fallen into error, for only in recent years has vaccination default been as large as stated, and continued default of this sort over a prolonged period would be required to justify Mr. WALLAS'S assumption. To apply the figures of the last few years to the population at all ages is a proceeding which Mr. SHAW would no doubt deplore. Sir CHARLES ELLIOTT was on safer ground. Referring to children only, and not to the population at all ages, he estimated the vaccinated proportion to be 70 per cent., and he allotted 348 cases of small-pox to the vaccinated and 899 cases to the unvaccinated, and further, dealing with deaths found that of 176 only two occurred "among properly vaccinated children and the remaining 174 among others." He does not appear to have stated the ages of the children to whom he was referring, but we may state generally that his figures will cause no surprise to those who are familiar with small-pox statistics.

We note, however, that Mr. WALLAS is not satisfied; nor, indeed, do we believe that if expert statisticians, satisfactory to Mr. SHAW, were to present to those who oppose vaccination the assurance of their satisfaction with the statistical evidence of its value that they would accept the assurance as deserving of their confidence. They would fulfil HAWTHORNE'S dictum. There are, however, large numbers of people who make no profession of knowledge of the subject: they follow, as indeed the greater number of us must follow in regard to much that concerns us in life, the teaching of others in whom they have confidence. It is here we would appeal to those who, as public men, can largely influence the action of this numerous class of the population. We ask them, before decrying vaccination in the public press or placing difficulties in the way of those whose duty it is to secure the protection of the public against small-pox, to be at pains to learn something of the subject with which they are dealing.

Annotations.

"Ne quid nimis."

THE HOME OFFICE ARBITRATION ON LEAD POISONING.

IN accordance with the Factory Acts of 1891 and 1895 an arbitration is about to be held in regard to the desirability of imposing new rules in the china and earthenware manufactories. For many years now the danger of lead poisoning in this industry has been denounced and has been the subject of many investigations and reports. The manufacturers, however, object to the new rules and have appointed Mr. Fletcher Moulton, K.C., to represent them and to defend their interests before the arbitrators appointed by the Home Office. It is, of course, only fair that the employers should be able to state their views and to defend their interests, but it would not be fair if the other side of the question were not represented with equal ability and thoroughness. Here, however, a practical difficulty arises. The workpeople have equal right to state their case, but they have not equal means of so doing. Arbitration is a very costly matter, and it is stated that the expenses of the solicitor for the workers will amount to about £250. It is true that Mr. W. S. Robson, K.C., has offered his services gratuitously if he is able to leave London at the time; but in the event of his absence a junior must be employed who must be a chemical expert. All this means money, which the manufacturers can easily afford, but which the workers do not possess. The trade unions concerned are only able to give £85, and some philanthropic persons who take an interest in labour and public health questions have subscribed further sums through the agency of the Women's Trades Union League, an organisation which has largely helped to awaken the attention of the House of Commons and of the public generally to the numerous cases of lead poisoning in the Potteries; but more help is wanted and we would point out that this is a question in which the public at large are interested as well as the workers engaged in this industry. The unscientific use of lead in the composition of glaze for enamelled saucepans and dishes used in cooking and in the storing of food has produced several accidents. The fat and acidity of food dissolve some of the lead in the glaze and thus there occur cases of plumbism in households that have no connexion with trades in which lead is employed. Therefore it is necessary that the umpire and arbitrator should have the case put fairly before them, and the attainment of the end in view must not be prevented by the fact that one side is better able to afford the expense of arbitration than is the other side.

"THE CREATOR OF THE CELLULAR PATHOLOGY."

UNDER this heading Professor Hugo Ribbert of Marburg gives in the opening article of the *Deutsche Medicinische Wochenschrift* of Oct. 10th a summary of the development of the cellular pathology and of its position at the present day. The article is one of a series evoked by the occasion of Virchow's eightieth birthday which has been so enthusiastically celebrated in Germany. The study of the localisation of disease first took practical shape with Morgagni, whose great work, "De Sedibus et Causis Morborum," was published in 1761. It is owing to Virchow that the seats of disease are no longer localised in organs, as was done by Morgagni, but that the inquiry has been carried from organs to tissues and from tissues to cells. He originally held the view advanced by Schwann, that every cell was a new formation produced from an albuminous solution by a kind of crystallisation process; his opinions, however, gradually altered and in 1855 he taught that cells were formed only from pre-existing cells (*omnis cellula e cellula*), a doctrine which was the leading feature of his classical treatise "Die Zellularpathologie," published in 1858. Virchow's discovery of the cells of the connective tissue formed the basis of his studies on parenchymatous inflammation in which the cells were first shown by him to be the seat of the disease. All subsequent investigations have been founded on these results, to-day no less than at the time of their first announcement, although in the course of time opinions may have undergone a change in some particulars. The knowledge of the importance of cellular changes in the explanation of morbid phenomena was only arrived at by degrees, and there are morbid conditions, such as nervous diseases, hysteria, and neurasthenia, to which even at the present time the doctrines of cellular pathology seem to be inapplicable. This, however, cannot be regarded as a failure of the theory, for it may be confidently expected that these symptoms will ultimately be traced to anomalies of the nerve cells, the pathological histology of which is only in the initial stage. If it is said that pyrexia cannot be explained according to the principles of cellular pathology it

may be replied that high temperatures and disorders of the heat-regulating faculty are probably dependent upon morbid conditions of certain cell groups of the central nervous system. Objections to the cellular pathology have for a long time been drawn from the phenomena presented by infectious diseases. But the exciting causes of infectious processes are only dangerous from the changes which they produce in the cells of the body, either directly or else indirectly by means of their toxins. Virchow himself has called special attention to the fact that in infection there is a struggle between cells and bacteria. Another view has been put forward to the effect that in infections changes occur in the blood, or, to be more precise, in its fluid constituents, which would be a return to the humoral pathology. But although the toxins actually produce certain changes in the substances contained in the blood in a state of solution, illness, nevertheless, is not manifested until the cells in some part or other have been affected. It is at present the almost universal belief that the bactericidal and antitoxic substances formed in the blood are produced through the instrumentality of cells. The cellular pathology is undoubtedly a well-established principle, and its illustrious originator has the satisfaction of knowing that for half a century it has been a reliable guide in many fields of medical inquiry.

"LOOKING BACK."

WE have often commented upon the fact that the tendency nowadays amongst chemists engaged upon research is to become engrossed with the chemistry of the carbon compounds, probably because the materials are so abundant as to enable a never-ending list of new synthetic and very complex substances to be built up. This fascination has been very detrimental to the development of simpler chemistry, such as the chemistry of the inorganic elements. The ordinary facts of inorganic chemistry are accepted, but it often happens that in the light of modern inquiry the changes or actions or phenomena concerned are not so simple as was at first supposed. An excellent illustration of this will be seen in an interesting piece of chemical history recorded in our "Looking Back" column to-day. As may there be found M. Döbereiner discovered the fact in 1823 that finely divided platinum possesses the power of determining the union of gases, but to this day the nature of the action is not precisely understood. All we know is that when a jet of hydrogen or other combustible gas is allowed to impinge upon finely divided platinum or platinum black in the presence of oxygen union of the gases results with such manifestation of heat that the platinum soon gets red hot. An apparatus generating hydrogen and provided with a cage of platinum was subsequently designed and known as the Döbereiner lamp. The principle has been applied, but with limited success, to the self-lighting of gas flames, obviating the use of matches or other means of igniting gas. We believe that the principle has been applied in connexion with the Welsbach light in particular. After a time, however, the platinum loses its property, perhaps by becoming damp or more probably by the effect of the destructive sulphur compounds in the coal-gas on the platinum. But the effect, as we now know, is not confined to platinum; other metals, such as palladium and gold, and even stones and glass according to Professor Tilden, exhibit the same property, although in a far lower degree, since they often require to be aided by a little heat. The explanation of the phenomenon is given by supposing that solid bodies in general have to a greater or less extent the property of condensing gases upon their surfaces and that this faculty is exhibited pre-eminently by certain of the non-oxidisable metals, such as platinum and gold. Why they possess this property we do not know. A warmed coil of platinum wire suspended over the wick of a spirit-lamp will ultimately glow and amongst the products of partial combustion of the spirit is formaldehyde, one of the most powerful of modern antiseptics. Similarly a coil of platinum wire will glow in ether vapour, an irritating and incomplete product of combustion ensuing. As we have said, the exact nature of this interesting discovery recorded in our columns exactly 78 years ago is yet but ill understood and therefore it still leaves, in the words of this classic paragraph, "a new field for physical and chemical researches." It is interesting to add that it was six years after this discovery that Döbereiner pointed out that when families of closely-allied elements are examined they are commonly found to consist of three members. For example, in the case of chlorine, bromine, and iodine, or sulphur, selenium, and tellurium, or lithium, sodium, and potassium, the values of the atomic weights are so related that the middle term of the series is nearly the arithmetical mean of the two other terms. Thus the atomic weight of lithium is seven and that of potassium 39, and the mean of these figures is 23, the atomic weight of sodium. These observations were the foundation of the famous periodic law.

PSYCHICAL TROUBLES DUE TO A TUMOUR OF THE FRONTAL LOBE OF THE BRAIN.

IN the *Revue Neurologique* of Sept. 15th Dr. Raymond Cestan and Dr. Paul Lejonne record an interesting case of a tumour involving the frontal lobe and attended with peculiar psychical disturbances. The frontal lobe has been hitherto regarded as a "silent" area of the brain in its anterior half—i.e., in the part in front of the Rolandic gyri—but the recent observations of Flechsig, von Bruns, and Höniger have cast doubt on that supposition. The following case throws some light on this obscure question. A woman, aged 33 years, was admitted into the Salpêtrière in August, 1900, suffering from right hemiplegia, complete blindness, and mental disturbance. She was free from neuropathic heredity, sober in habits, and free from syphilis and from convulsions during childhood. In October, 1899, she suffered from a violent frontal headache, persisting day and night, and of a gnawing character. Almost at the same time she developed epileptiform attacks with temporary loss of speech but without loss of consciousness. The symptoms became worse, she had attacks of vomiting, and gradually the fits tended to become generalised. In the beginning of 1900 she had a remission of these troubles, but optic neuritis accompanied by gradual failure of vision now succeeded, and in May, 1900, she was completely blind. The attacks of vomiting and the headaches had now quite disappeared. A third stage now followed as regards her disease, characterised by motor phenomena and intellectual disturbances. The motor symptoms consisted of a permanent right-sided hemiplegia and convulsions. Cutaneous sensibility was apparently normal and the stereognostic sense was unimpaired, though it was difficult to be certain on these points owing to the intellectual disorder present. The hemiplegia grew more marked, contraction of the right arm followed, and finally the sign of extension of the great toe on plantar stimulation (Babinski's reflex) made its appearance. She had on an average four or five slight epileptiform attacks and one violent seizure per month, but without loss of consciousness. The mental symptoms which appeared at the onset of her illness were a slight degree of intellectual apathy and torpor, which was probably associated with cerebral compression and which has been frequently observed in cranial neoplasms. But in May, 1900, a different mental condition appeared. She passed into a state of high spirits (euphoria), looking happy and smiling when spoken to, complaining no longer, and showing signs of good spirits and good appetite. Her intelligence, however, seemed a little blunted, and she laughed at almost

everything which was said to her. There were no hallucinations of sight or of hearing, no melancholic depression or maniacal excitement, and no moral perversion. She sat still most of the day, smiling and looking happy, exhibiting, however, little initiative or volition of her own (aboulia). Her memory for recent occurrences was not good; they did not seem to be properly retained in her memory as it now existed, and she failed to show the least recollection of what friends and relatives who now visited her had said to her. Her natural affection to them also seemed to be lost or replaced by indifference. Her habits were neat and clean and she was free from dementia. In April, 1901, a somnolent state succeeded the condition of euphoria, coma supervened, and she died in June. The necropsy revealed a large cystic tumour of the left frontal lobe of the size of an orange, filled with serous fluid and involving the posterior two-thirds of the prefrontal lobe and compressing the Rolandic area.

MISLEADING NAMES FOR GENERAL AND LOCAL ANÆSTHETICS.

IT has been generally recognised that a great danger arises when powerful drugs are sold under factitious names, such names being not in fact the chemical designation of the poison contained in the compound. Of late this danger has been rendered greater by the introduction into the market of various substances of a most powerful and even lethal character which are vaunted as general or local anæsthetics under what are at best mere fancy names. In a recently issued French work we found several of such substances named, and there lies before us a catalogue of dental appliances in which are advertisements of other anæsthetics cloaked under registered names. As all such substances are puffed as being quite safe and in all respects ideal anæsthetics we think it time to put our readers upon their guard. It has been a mournful repetition of history that every anæsthetic has burst upon the horizon of practice as an "absolutely safe" body, only as time wore on to fall into the sphere of "dangerous" unless used with knowledge and skill. When we work with known substances, the physiological actions of which are recognised, we possess at least safe-guiding principles upon which to base our practice, but when we undertake to anæsthetise with a fancy nostrum we run a grave risk of summoning not Sleep but her twin sister, Death.

THE DUTIES OF A PUBLIC VACCINATOR.

A SUMMONS was applied for a few days ago at Marlborough-street Police-court for an alleged assault of a somewhat unusual nature. The advocate who made the application stated that a public vaccinator had visited a house and in the absence of the parents vaccinated two unvaccinated children whom he found there. The essence of the supposed offence was contained in the assertion that one of the children, aged 13 years, had protested that her parents and she herself objected to vaccination. Mr. Denman refused to grant a summons, pointing out that the children were liable to be vaccinated and the parents to be prosecuted in default, while if all that was alleged was proved there would only have been a mistake in duty committed without criminal intent. His decision clearly embodied sound sense and good law, for it is preposterous to suppose that the public vaccinator laid forcible hands upon a girl of 13 years of age and compelled her to undergo vaccination or that he terrified her into submission, and unless there was a likelihood of conditions such as these being proved it would have been waste of time to grant a summons. At the same time, we may congratulate the public vaccinator on having avoided a tedious and irritating ordeal. Not all magistrates have the strength of Mr. Denman, and excess of zeal may place a public vaccinator who has erred from such a cause in an awkward predicament. Therefore it is advisable for those connected with the enforcement of the law rigidly to confine themselves to the duties which it imposes upon them. If the legislature does not sufficiently protect the unwise from small-pox, and if the unwise are unwilling to protect themselves and their offspring, no one is called upon to expose himself to the expense and worry of criminal proceedings in the fulfilment of what is at best a thankless task. We should mention that Dr. Purdie, in a letter which appears in the *Daily News* of Oct. 16th, states that the children in question never said or did anything to lead him to believe that their parents did not wish them to be vaccinated.

SMALL-POX IN LONDON.

DURING Tuesday, Oct. 15th, 10 fresh cases of small-pox were admitted to the hospitals of the Metropolitan Asylums Board, and during Wednesday, Oct. 16th, there were four fresh cases. At an inquest held on Oct. 15th into the circumstances attending the death of Annie Bowen, aged 12 years, the daughter of a coal-porter residing in Limehouse, some remarkable facts came to light. The mother, in giving evidence, said that the child came home on Oct. 10th from the Roman Catholic School in Copenhagen-place complaining of headache. On Oct. 13th she was seen to have a number of black and blue spots on her body. None of the witness's children had ever been vaccinated, neither had they been registered. Mr. Samuel Robert Dudley said that death was due to small-pox. He had seen five other of Mrs. Bowen's children, all of whom were suffering from small-pox. He informed the medical officer of health and within one hour all the children were removed. The eldest boy, whom he had also seen, would not await the visit of the medical officer of health. The jury, in returning a verdict of "Death from small-pox," commended Mr. Dudley for his promptness. It now remains for the fugitive boy to be caught. It was stated that he worked at a coal-merchant's and we trust that the merchant in question will insist upon his staff either being all vaccinated or leaving. The managers of the school should also give every facility for their scholars to be inspected; and this simple precaution, as the school is not a board school, will probably be carried out.

BERI-BERI AND ARSENICAL POISONING.

ABOUT a year ago, when the existence of an epidemic of peripheral neuritis in the North of England was discovered and the cause was ascertained to be chronic poisoning by arsenic in beer, Major Ronald Ross, who had seen several of the cases at Chester Infirmary, laid stress upon their marked similarity to tropical beri-beri, and at the recent meeting of the British Medical Association he again brought the possible relationship between beri-beri and arsenic to notice. If, as may be presumed, this question has since been locally investigated in regions where beri-beri is common, it would be interesting to know what positive or negative results have been obtained. Meanwhile, there is at least one suggestive case on record, that communicated by Major Ross and Dr. E. S. Reynolds to the *British Medical Journal* of Oct. 5th last. Here the patient, a Scottish lady and wife of a missionary, when living on the West Coast of Africa was attacked by peripheral neuritis, the symptoms of which were indistinguishable from beri-beri of the "paralytic" type. She had none of those symptoms unmistakeably indicative of arsenic which characterised some of the later cases during the Manchester epidemic. While still suffering from the disease she returned to England and was admitted to the Royal Southern Hospital, Liverpool. Her hair was then examined by Dr. Dixon Mann who found in it considerable

quantities of arsenic, proving, to use his words, "that a considerable quantity of arsenic had been taken into the system of the patient, either by administration as medicine"—of which there is no affirmative evidence—"or in some other way." In this country we meet with beri-beri only at rare intervals, almost exclusively at our ports and among sailors. In most instances the sufferers are Asiatics, but occasionally at certain ports—Falmouth, for example—sailing vessels put in after long ocean voyages during which one or more members of a European crew have been attacked. It is noteworthy that in these cases rice, which has been suspected for good reasons to be associated with the disease in the East, has formed no part of the diet of the sufferers. It is, of course, possible that the peripheral neuritis which is the chief characteristic of the malady of these European sailors may not be due to the same cause as tropical beri-beri. But, however this may be, the few facts known about the ship-borne cases which come to this country suggest that the illness is to be connected in some way or other with diet rather than with an infective process, and it is important that here also arsenic should be kept in mind as a possible cause. We understand that the Royal Commission on Arsenical Poisoning last month invited the coöperation of the medical officers of health of certain selected ports in investigating the subject when opportunity offers, and this inquiry, together with the investigations which Dr. H. E. Durham and others are about to make on behalf of the London School of Tropical Medicine into endemic beri-beri on Christmas Island and elsewhere in the Pacific, may be expected at no distant date to throw some light upon this very interesting question.

RICH HEADS AND POOR DINNERS.

IN a passage of his "Confessions" descanting upon the nature of drunkenness De Quincey concludes that the exact condition indicated is a question of accuracy in terms. He was assured on medical authority that a man could be, and had been, drunk upon a beef-steak. This is largely true, for even solid food may produce at any rate great mental torpor. The comfort of a good dinner may have suggested a writer's theme, we doubt whether it ever promptly stirred his pen. It is the empty stomach that best suits a full head and ideas that flow out freely before retire with the entry of a substantial repast. Oliver Wendell Holmes, with that charming blend of wit and scientific knowledge that gave the distinction to his writings, has discoursed upon this very point. He talks of the "bulbous-headed fellows steaming as they write" and shows how to meet the demands of thought and imagination. The brain must have more than its share of the circulating blood. There must be no rival in the full liver or the actively digesting glands of the gastric mucous membrane. Do not eat heavily, then, if you are soon to think hard. Either your ideas or your dinner will be neglected and lie a sorry weight upon your head or your epigastrium. The poor half-starving poet is familiar to everyone. We may mitigate our pity by reflecting that in many cases he would have been no poet if he had not starved. Enough fuel to sustain the fire of life is necessary for work, but heap on the coal and you will deaden the overburdened flame. The great thinkers, the great workers in any direction but a purely physical one, have for the most part been abstemious men. If not naturally of small appetite they have exercised constant restraint, grudging from the play of higher functions every moment and every energy spent upon the animal activities of their nature. Habit soon helps the fine effort of such people, and it becomes natural for them to eat less, to drink less, and to sleep less than their fellows. Thus, in a long life of intellectual activity many scores of hours are utilised for the main purpose which in the case of other men are squandered upon the dinner-table or in the mere nothingness of sleep or idling. Carlyle was justified in declaring a capacity for work to be the essence of genius. Whatever great man's life is read, no matter how brilliant his natural gifts, sooner or later he is found to have worked with unswerving constancy and imperturbable devotion. Others as gifted have left no mark; it was in the will and the power to work that the genius asserted itself. It is common to hear a man say, "So-and-so is a genius, if he worked he could do anything." Just because he does not work "So-and-so" must be denied the title. In the natural sciences, and professions such as medicine that depend upon them, the inevitableness of great work for great achievement is, perhaps, more obvious than in the service of art and literature. The artist and the writer of genius are gifted with inspirations falling to no man of mere talent, however hard he works. Yet even so the genius works to illustrate his inspiration, whether it is Raphael at his easel or Shakespeare at his desk, with a kind of frenzy of application and a continuous determination that are impossible to men not so endowed. Such labours of the will and of the brain demand at the time the whole energies of a human being. No lower member of the confederated body which is man must seek employment while the master parts are thus at work. So it is, then, that the little-eating worker blesses the world with fruits which the voluptuary and the *gourmet* may possibly enjoy at his well-fed ease, but can never hope in the least degree to emulate.

CHOLERA IN JAPAN.

VARIOUS epidemics attended with a great mortality are recorded in the Japanese annals, but no satisfactory data exist for the identification of the diseases concerned. In 1890 a committee was appointed by the Central Board of Health, Department for Home Affairs of the Imperial Japanese Government, to consider questions relating to the inspection of shipping and the sanitation of the ports open to foreign traders. The subject obviously involved a reference to previous experience of outbreaks of disease in Japanese seaports, and the committee arrived at the conclusion that the first positive knowledge of the prevalence of Asiatic cholera in Japan was in 1822. The second epidemic outbreak, according to Japanese accounts, was from 1858 to 1860; the third from 1877 to 1879; the fourth in 1881 and 1882; the fifth in 1885 and 1886; and the sixth in 1890 and 1891. The seventh and last epidemic, which continued from the beginning of 1895 to 1896, was undoubtedly a result of the war between Japan and China, and supplied material for an interesting report written by Dr. William F. Arnold of the United States Navy, at that time serving on the China and Japan station. This narrative was published in the annual report of the Surgeon-General of the United States Navy for the year 1897, and has just been reprinted by the author who, after an absence of some years, is once more in Japan. Statistics of cholera in the Japanese empire since 1877 have been published. From these it appears that in 1894 there were 546 cases with 314 deaths; in 1895 there were 53,999 cases with 38,500 deaths; and in 1896 there were 350 cases with about 150 deaths. The Japanese forces engaged in China suffered severely from cholera at the end of 1894 and beginning of 1895, but on the whole the incidence of the disease in the Japanese army and navy has been slight. In the navy during 1895 only 93 cases were recorded. No pains have been spared by the Japanese authorities in the repression of the various recent epidemics and great efforts were made to secure the coöperation of the public in preventive measures. In 1890 lectures, popular publications, magic-lantern exhibitions, effective illustrations, and handbills

were freely employed and the police regulations requiring cooked food to be protected from the access of house flies were vigorously enforced. In the city of Hiroshima a microscope was on view in a temple, and it is said that the demonstration of the living organisms in water to housewives was much more impressive than lantern exhibitions. Dr. Arnold, writing in August, 1901, states that no cases of Asiatic cholera have been proved to have occurred in Japan since 1896, and acknowledges the assistance afforded to him in his inquiries by Dr. Isaac Nakagawa, professor of bacteriology in the medical school at Sendai, Japan.

THE DISTRIBUTION OF PLAGUE.

A TELEGRAM from the Governor of the Cape of Good Hope received at the Colonial Office on Oct. 9th states that during the week ending Oct 5th in the Cape peninsula there were 2 cases of plague, both in natives, with 1 death. At Port Elizabeth there were 2 cases, both in Europeans, and 3 deaths, 1 of a Chinaman and 2 of natives. The area of infection remained unchanged. There were no military or naval cases. In Mauritius during the week ending Oct. 10th there were 65 cases with 47 deaths.

PNEUMOCOCCIC MEMBRANOUS INFLAMMATIONS OF MUCOUS MEMBRANES.

IN an annotation[1] we have recently called attention to the numerous affections which may be produced by the pneumococcus. The subject was very exhaustively discussed by Mr. Alexander G. R. Foulerton at the recent annual meeting of the British Medical Association.[2] But his admirable paper contains no allusion to membranous inflammations of mucous membranes of which the following case, published in the *American Journal of the Medical Sciences* for September by Dr. Charles Cary and Dr. Irving P. Lyon, is a remarkable example. A boy, aged 11 years, was taken ill with sore-throat on Jan. 5th, 1901. On Jan. 7th the throat was reddened and there were incipient signs of pneumonia at the base of the left lung. On Jan. 11th the right base was also affected and an abundant white exudation covered both tonsils. Next day herpes appeared on the lips and the exudation was more or less diffused throughout the mouth and throat. On Jan. 13th there were fibrinous conjunctivitis and subconjunctival hæmorrhage and the lids were swollen and adherent. The mucous membrane of the lips, gums, cheeks, margin and under surface of the tongue, hard and soft palate, fauces, tonsils, pharynx (as far as could be seen), and nose was covered with a continuous white exudation, which could be torn off in shreds, leaving a raw granular bleeding surface. The boy picked at his nose and lips and thus apparently transferred infection from one place to another. On Jan. 15th the glans penis showed the same membranous inflammation as the other parts. On Jan. 16th the anus was involved and membranous shreds were found in the stools. For, several days there had been tympanites and the stools had been frequent and soft and had contained considerable mucus. Respiration was laboured from accumulation of mucus in the upper air passages. The sputum contained fibrinous casts of the finer bronchi with dendritic processes, a few red blood corpuscles, and numerous pneumococci. The organism, practically in pure culture, was also found in the exudation on the various mucous membranes. The diphtheria bacillus was absent. The membranes persisted for about four weeks in spite of antiseptic treatment. That the pneumococcus is capable of causing such membranous exudations is attested by various observers. Bristowe in 1879 mentioned that membranous patches on the mucous surface of the large intestine were sometimes found in pneumonia. Osler, in 1885, reported five cases of "croupous colitis" in 100 necropsies on subjects who had died from pneumonia. In one case the cæcum was covered with a thin layer of adherent lymph and scattered throughout the colon and sigmoid flexure were numerous patches of lymph. Weichselbaum found the pneumococcus in the intestinal croupous exudation in a case of pneumonia. Rochon has described the case of a boy, aged two years, who during whooping-cough developed severe and continued diarrhœa with an eruption of vesicles about the anus. In the fluid of the vesicles the pneumococcus was found in pure culture. During coughing prolapsus recti occurred, revealing in places on the mucous membrane exudation which contained numerous pneumococci. Pneumonia and death followed. Wetter has reported the case of a boy, aged three years, in which during an attack of varicella tracheotomy was required for laryngitis. Membrane was expelled through the tube containing no diphtheria bacilli but pneumococci. Cases of pneumococcic membranous inflammation of the throat, conjunctiva, and nose simulating diphtheria and independent of pneumonia have been recorded. But in most of the cases of pneumococcic conjunctivitis the inflammation could hardly be called membranous, it was characterised by small fibrinous shreds which were sometimes lightly adherent to the mucous membrane. When it is remembered that the pneumococcus is *par excellence* the cause of fibrinous inflammation of the lungs the occurrence of the same process on other mucous membranes should not cause surprise.

[1] Fatal Intestinal Hæmorrhage in Pneumonia, THE LANCET, August 17th, 1901, p. 460.

[2] THE LANCET, August 17th, 1901, p. 472.

FISH-CURING.

MOST people know in a general sort of way that herrings are migratory fishes, and that the shoals appear off the Hebrides and then travel in a southerly direction round the coast of Scotland and England. The date at which they first appear is not always exactly the same, but it does not differ to a much greater extent than that of the first appearance of the cuckoo in the south of England or the departure of the swallows from the eastern coasts. The shoals of herrings are followed by fleets of fishing-boats, some of which come from ports as far from the North Sea as Penzance in Cornwall and Brixham in Devonshire. The fishermen who man these boats are, however, not the only people whose movements depend on the migration of the herring. A great many women are similarly affected; they are to be numbered by thousands, and it is to the unnecessary hardships endured by these people that we wish to direct attention. The industry of fish-curing is performed in great part by a nomadic population consisting chiefly of strong and healthy young women, daughters of fisher folk, who go from the north towards the south and return home after their work is done. Some come from places as far north as Stornoway and Shetland. Fraserburgh and Peterhead are the centres of the fish-curing industry in July and August, Scarborough and Grimsby in September, and Yarmouth and Lowestoft in October. To give some idea of the number of people engaged in the work it may be said that as many as 3445 women have been engaged at one time at Fraserburgh, and of these no fewer than 3000 were "foreigners"—for amongst fishing people everyone not born in the place is a foreigner. The work which has to be done is cleaning, salting, and packing the fish for the continental markets. The sleeping accommodation provided for the women is not luxurious, but it is possibly better than many of them enjoy at home—and, according to an official report made by one of the factory inspectors, they live in a state of "marvellous harmony." In Yarmouth the curing trade is carried on in an open space which is undrained and the soil of which is therefore much polluted. Here the work is done in spite of

wind and rain. The processes which precede the making of kippers—the pickling and splitting of the fish—are carried on under cover. The people engaged in the work are crowded, the rooms are often ill-lighted, the flooring is defective, and proper provision is not made for the removal of the refuse. This state of things is not one to be commended and the sanitary authorities of Yarmouth cannot be held to be entirely free from blame in this matter, especially as the land on which the open-air work is carried on belongs to the town, and therefore the civic authorities are the more easily able to make proper restrictions as to its use. It is to be hoped that in the future they will not neglect to carry out such an obvious duty. In France and in Belgium the factory laws insist that the walls and floors of rooms in which organic matter is treated shall be made of impermeable material, and, moreover, they provide for the immediate removal of organic refuse. It would be well if similar regulations existed in England. But in the absence of such a law there is the more reason why those who work at fish-curing should at least have the full measure of protection which is provided for them by the statutory provisions which are already in force in matters pertaining to the public health.

A MEDICAL REPORT ON UGANDA.

WE have received a copy of "A General Medical Report on Uganda" by Dr. R. U. Moffat, C.M.G., principal medical officer of the Uganda Protectorate, East Africa. The region included in the protectorate comprises a large tract of country the several parts of which differ entirely in their climatic conditions, varying from the cold and healthy altitudes of the Mau Escarpment to the hot and malarious shores of the Victoria Lake and Nile valley, so that in compiling a comprehensive report Dr. Moffat has found it necessary to take notice of these differences, and he has ably pointed out the main aspects of the various districts into which the country may roughly be divided from the point of view of health. This part of the report is very instructive, but a bare abstract would not be of value and we refer those of our readers who are interested in the matter to the original report. Dr. Moffat further points out that the report may be open to misconception owing to the fact that the Government medical officers at most stations have little to do with the aboriginal natives of the country. For this reason the records based on their work do not afford an entirely trustworthy index of the diseases peculiar to the country. In the great majority of cases the patients treated are alien to the country Many diseases which, perhaps, are common among the aboriginal tribes may seldom or never occur among the well-fed and better-tended Government employés. On the other hand, these latter may bring with them the seeds of diseases contracted in their own country but which may not be endemic in the Uganda Protectorate. Malaria is endemic through the whole of the western provinces of the protectorate comprising the districts of the Lake level and the Nile valley. The types of fever commonly met with are the tropical quotidian and tertian, the latter more commonly among Europeans. The benign tertian and quartan forms are seldom met with. By far the most important and dangerous form of malaria is that complicated with hæmoglobinuria, the so-called "black-water fever." Dr. Moffat does not discuss whether this condition is indeed malaria or an entirely different disease—as he remarks, his report does not form a suitable occasion for such a discussion; he merely states that he has never seen any reason to connect it with the administration of quinine, and he recommends that in the treatment of the disease the drug should be given speedily and in large doses. Owing to the severe vomiting it is impossible to give quinine by the mouth and therefore Dr. Moffat suggests that it should be given by intra-muscular injection and describes his method of so administering it. Many other diseases are considered, the most important of which are dysentery and yaws. With regard to the treatment of the latter, Dr. Moffat states that he has had excellent results from the internal administration of mercury. The report should prove very interesting to those who have experience in tropical diseases.

SALICYLIC ACID IN WINE.

THERE seems to be little doubt that salicylic acid is occasionally a natural constituent of genuine wine and this observation is of considerable importance in connexion with the preservation of wines by artificial means. In most foreign countries the addition of salicylic acid to wines is forbidden. The fact, therefore, that wines may normally contain the acid is calculated to lead to confusion and not impossibly an injustice might be done, by condemning a wine because it contained the acid which after all may prove to be a natural constituent. The amount of natural salicylic acid in wines is, however, small and no definite evidence of its presence is indicated until five or six ounces are operated upon for the test. It has accordingly been proposed that when seeking for salicylic acid in wine not more than a couple of ounces should be employed for the test. This recommendation has, as a matter of fact, been adopted in Germany. The quantity of salicylic acid in genuine wine is invariably so small that it is difficult to attach any special significance to it in regard to its effect either upon the wine or upon the person who consumes it.

BELLADONNA POISONING.

A CORRESPONDENT informs us of the details of a case of poisoning by belladonna brought about by the application of a belladonna plaster. A young lady had been indulging in the sport of duck-shooting and in so doing got very wet. An attack of lumbago followed. A practitioner was not sent for, but whisky was rubbed into the painful region. The pain continued for four days; then the back was rubbed with "Jacob's oil." This only produced a slight redness which disappeared in a few hours leaving the skin quite normal in appearance. On the fifth night a belladonna plaster was applied. The patient wished to go out duck-shooting on the following morning, but when her maid went to rouse her at four o'clock in the morning she was found to be suffering from the characteristic symptoms of belladonna poisoning; her throat and mouth were dry, there was a burning sensation in these parts, and she could scarcely speak, the pupils were widely dilated, and she "had lost the power of controlling her movements ..... and her hands felt as though they were getting smaller." Apparently she rapidly recovered. Several cases of this nature have been recorded. Dr. W. J. Howarth reported one case in THE LANCET of Jan. 27th, 1894, p. 204. A man began to feel that his mouth was dry three-quarters of an hour after putting a belladonna plaster, six inches by four, on his back; the pupils were widely dilated, and delirium of the characteristic type occurred. Idiosyncrasy towards belladonna is not uncommon and many adults are unable to tolerate a dose which a young child could take with impunity. The practitioner who attended the above case is reported to have said that if the patient had not been discovered to have been suffering from belladonna poisoning until four hours later it would "have been too late, in all probability, to save her." We are not aware that a fatal case of belladonna poisoning produced in this manner has ever been reported, and the symptoms have occurred when no previous applications to the back have been made. Our correspondent suggests that it should be made compulsory that a warning should be issued with every plaster sold that serious symptoms may arise in its application, especially if the skin has been abraded. We

think the suggestion a good one, although such cases are extremely rare. It would be still wiser, however, if a druggist was not permitted to sell such a plaster without a prescription from a qualified medical practitioner. It is worthy of note that the emplastrum belladonnæ of the new Pharmacopœia is much weaker than that of 1885. Our correspondent further asks whether a plaster of belladonna and opium would produce the poisonous effects of the former drug. Such a plaster is not official; it would depend in great measure upon the relative strengths of the two ingredients.

SOFT WATER AND SOAP.

IT is commonly supposed that the use of soft water—rain-water, for example—for washing purposes economises soap. But while it is perfectly true that the lime salts in hard water nullify to some extent the soap by forming insoluble lime soaps, yet the expenditure of soap, at least in toilet purposes, will be found to be considerably less than when rain-water is used, while the cleansing effect is just as good. The explanation of this is that soap is so very readily soluble in soft water that considerably more soap is used than is necessary. Everybody knows the slippery feeling of rain-water in which the hands have been washed with soap, and no amount of rinsing would appear to remove the soapiness from the skin. In this case it is doubtful when soap is used whether, after all, rain-water or soft water is better for the complexion or skin than hard tap-water. It is certainly not so refreshing. In manufacturing processes or in the wash-tub it is true the use of soap in soft water is an economy. It is in this way, of course, that the addition of soda, throwing out the lime salt, saves soap. It has been estimated that if London were supplied with soft water the saving of soap would amount to tens of thousands of pounds per annum, and Glasgow is estimated to save £36,000 annually in the matter of soap since using Loch Katrine water. That may be so, but in the matter of personal washing there is a waste of soap produced rather than an economy by using soft water. The fact that a tablet of soap disappears much more quickly when rain-water is used instead of hard tap-water is proof of this assertion.

THE PATHOGENESIS OF DELIRIUM TREMENS.

DR. K. BONHŒFFER of Breslau, in a recent communication to the *Berliner Klinische Wochenschrift* (No. 32, 1901), deals with the pathogenesis of delirium tremens, based upon a study of 250 cases of the disease observed during three years. After referring to the conditions present in the disease—viz., acute hallucinatory mental confusion, transitory albuminuria, dicrotism of the pulse, and in fatal cases intense cerebral hyperæmia, and even small hæmorrhages into the brain—he discusses the etiological factors of delirium tremens. Sudden withdrawal of alcohol is one of the factors and injuries (especially cranial injuries) are prone to develop the attack. The presence of epilepsy as a complication increases the liability to delirium tremens in alcoholic subjects. The most potent causes are, however, first, infectious diseases affecting the lungs and respiratory organs, and secondly, gastro-intestinal disorders. Jacobsohn in Denmark and Villiers in Belgium found that 17 or 18 per cent. of cases of delirium tremens were complicated with an acute disease. Tabulating the acute bodily diseases which thus complicate, or participate in the production of, delirium tremens Dr. Bonhœffer found that 20 per cent. were cases of pneumonia, while 28 per cent. included such disorders as acute bronchitis, pleurisy, pulmonary hæmorrhage of tuberculous origin, cellulitis (including erysipelas), paronychia or whitlow, and acute exanthemata; 11 per cent. comprised marked gastric disorder, diarrhœa, and hæmatemesis from cirrhosis of the liver; 10 per cent. were cases of traumatic nature; and 23 per cent. were complicated with epilepsy. The remaining acute disorders provocative of delirium tremens were rare and amounted altogether to 8 per cent. As regards the pathogenesis of the disease Dr. Bonhœffer inclines to the view that it is of a toxic nature, the clinical form being usually that of acute hallucinatory mental confusion. He also recognises distinct pathological changes in the nerve-cells of the cerebral cortex in fatal cases of delirium tremens, such as chromatolysis, pigmentary degeneration, and vacuolation of the cells, intense capillary hyperæmia of the cortex with minute hæmorrhages into the grey substance, and a hyperplasia of the neuroglia cells, as described by him in a recent publication.[1] The clinical varieties of delirium tremens noted by him are the same as those observed by Evenson, to which reference has already been made in these columns.[2]

CLINICAL THERMOMETERS AND THE CASUAL GERM.

A CORRESPONDENT has addressed us upon ground that medical men are careless in cleansing their clinical thermometers. Thus, he says, they support the "Christian Science" doctrine, which seems to us to pertain somewhat to the nature of a "bull," "that there are no germs, but doctors bring them." Now we should be sorry to believe that this patient's experience is at all a common one. Often, he declares, "the thermometer has been stuck in my mouth and dropped back into the case again without a wipe or a wash." Anyone, he very reasonably adds, prefers to see the thermometer washed before and after use. This is no doubt the general practice; there can, of course, be no excuse in any amount of hurry for not at any rate placing the thermometer in water after use and wiping it dry before returning it to its case. Elaborate cleansing is not necessary, nor do we need what our correspondent appears to hanker after, any attempt at sterilisation. The clinical thermometer is not an object that carries gross dirt easily, and therefore water and a clean towel after being used suffice to keep it in decent condition. As regards microbic accompaniment, we may allay our correspondent's fears by assuring him that any thermometer treated as we suggest will not add materially to the microbes that already swarm within his mouth. He is probably in blissful ignorance of the saprophytic condition of his own mucous membrane, and the comparative purity of a glass thermometer. Indeed, he is far more likely to give than to receive in this instance, and if a previous patient also conferred bacterial gifts upon the thermometer these are unlikely to have survived the intervening period between the two occasions when it was used. However, we perfectly sympathise with his protest, considering his unpleasant, and, we trust, unique, experience. After pleading for cleanliness our correspondent concludes with the Jane-Austenian observation that "safety and sensibility alike demand it." We can assure him that the medical profession have no "Pride and Prejudice" in a contrary opinion. It may also allay his apprehension to remember that not infrequently medical men place the thermometer in the axilla rather than in the mouth, although we believe this to be on the whole a less trustworthy position for recording the body temperature, as the instrument is there affected by conditions of perspiration, want of accurate contact, and possibly clothing.

WE understand that the Secretary of State for India has sanctioned an increase of 26 officers to the Indian Medical Service. This will help to get over the difficulty about leave.

THE autumn dinner of the Edinburgh University Club, London, will be held on Wednesday, Nov. 13th, at the Criterion Restaurant. Professor John Chiene, C.B., M.D., F.R.C.S. Edin., will take the chair.

[1] Monatschrift für Psychiatrie und Neurologie, 1899.
[2] THE LANCET, Sept. 16th, 1899, p. 793.

PROFESSOR VIRCHOW'S EIGHTIETH BIRTHDAY.

PROFESSOR VIRCHOW was born on Oct. 13th, 1821, at Schievelbein, a village in Pomerania. In 1891 his seventieth birthday was celebrated with much enthusiasm in Berlin, and now that he has reached the advanced age of 80 years in the enjoyment of great mental vigour and an amount of bodily energy unusual at his time of life, the anniversary has been attended by manifestations which in their spontaneity and warmth leave no doubt as to the place which he holds in the hearts of his countrymen. Oct. 13th, 1901, was a Sunday. The celebrations began on the previous day with a reception in the new Pathological Institute in Berlin, where the company included the Minister of Education, Herr Studt; the Chief of the Imperial Chancellery, representing Count von Bülow; Baron von Richthofen, the Foreign Secretary; Count Posadowsky, the Secretary of State for the Interior; Herr Möller, the Prussian Minister of Commerce; Herr von Thielen, the Minister of Communications; Dr. von Leuthold, the General Staff Surgeon of the Army; Herr Kirschner, the Chief Burgomaster of Berlin; Dr. Langerhans, the President of the Berlin Municipal Council; and very many representatives of German and foreign medical science. The Minister of Education, Dr. STUDT, said that the name of Virchow would be for ever associated with the Pathological Institute, but in order that future generations might possess a likeness of its founder he, on behalf of the Ministry of Education, presented the institute with a marble bust of him. Professor VIRCHOW expressed his thanks in cordial terms, and then proceeded to deliver an address on the Development of Pathology and the special objects of the institution in which they were assembled. In conclusion, he claimed for pathology a place among the biological sciences. Various micro-organisms were then shown under microscopes and as lantern slides by Professor Koch and others. At 6 P.M. Professor Virchow was entertained at a banquet held in one of the halls of the buildings where the Prussian Diet meets. The company included his wife and several other members of his family, eminent German and foreign men of science, and representatives of the Government. Count POSADOWSKY, the Imperial Home Secretary, proposed the health of the German Emperor. Dr. KOERTE proposed the health of Professor Virchow, and Dr. ALTHOFF of the Ministry of Education presented him with his portrait showing him at the age of seven years as well as with one of his school certificates. The chief event of the celebration commenced at 8 P.M. in the buildings used by the Prussian Chamber of Deputies and was not concluded till long after midnight. This was the presentation of addresses by German and foreign delegations. Professor WALDEYER, who presided and delivered an eloquent address, said that a sum of 50,000 marks (£2500) had been collected for the purposes of the "Virchow Fund" for the promotion of scientific research. Dr. STUDT, the Prussian Minister of Education, then read a letter from the German Emperor to Professor Virchow, warmly congratulating him on the anniversary of his birthday, and eulogising the great services which he had rendered not only to the scientific side of medicine but to its practical application for the benefit of mankind. In conclusion, the Emperor wrote that in recognition of his distinguished labours he had that day conferred on him the Grand Gold Medal for Science and now sent it to him. The Imperial Chancellor, Count von Bülow, also sent a letter of congratulation. The address of the municipality of Berlin was presented by the Chairman of the Municipal Council, Dr. LANGERHANS, who announced that the city had contributed 100,000 marks (£5000) to the "Virchow Fund." The foreign delegates included representatives of medical science from Great Britain, France, Russia, Italy, Austria, and other countries. Great Britain was represented by Lord Lister, who wore the Prussian Order *Pour le Mérite*; Sir Felix Semon (Royal College of Physicians of London); Mr. Howard Marsh (Royal College of Surgeons of England); Dr. Rose Bradford (Royal Medical and Chirurgical Society and Pathological Society of London); Mr. Watson Cheyne (Pathological Society of London); Professor Robert Muir (University of Glasgow); and Dr. Graham Brown (Royal College of Physicians of Edinburgh).

Lord LISTER, who spoke in English, and was welcomed with hearty applause, said:—

Revered master, I am here as a delegate of the Royal Society of London, of which you are an honoured member, and on behalf of which I have to present to you a loyal address. I have been also requested to hand you addresses from six other societies which greatly regret that it has been impossible for them to send special delegates. They are as follows: (1) the Anthropological Section of the British Association for the Advancement of Science; (2) the University of London; (3) the University of Edinburgh; (4) the Faculty of Physicians and Surgeons of Glasgow; (5) the Medical and Chirurgical Society of Edinburgh; (6) the Royal Academy of Medicine of Ireland. All these bodies join in the recognition of your gigantic intellectual powers, in gratitude for the great benefits that you have conferred upon humanity, and in admiration of your personal character, your absolute uprightness, the courage which has enabled you always to advocate what you believed to be the cause of truth, liberty, and justice, and the genial nature which has won for you the love of all who know you. The astonishing vigour which you displayed in the address to which we listened to-day justifies the hope that, when many of us your juniors shall have been removed from this scene of labour, it may be granted to you to celebrate your ninetieth birthday not only in health and honour but in continued activity in the service of mankind.

Sir FELIX SEMON, who spoke in German, said:—

There are two reasons why I have been selected, dear master, to convey to you the sincere congratulations of the Royal College of Physicians of London. In the first place, the authorities thought it might be agreeable to you if the good wishes of the College were expressed by an old pupil who when he sat at your feet 30 years ago as a young German student did not suppose that he would one day have the honour of representing the venerable College in whose name he now speaks. In the second place, the College selected a native of Germany as its spokesman from a desire to give prominence to the fraternal feeling which has so long existed between German and British scientific men and to express thereby their cordial recognition of the beneficial influence which you have exercised upon science in Great Britain no less than in Germany.

His Excellency Dr. GUIDO BACCELLI, Minister of Agriculture in the Government of Italy, spoke in Latin as follows:—

Quod reipublicae medicae per orbem bene vertat, et faustum Germaniae felixque sit, tibi, Rodulphe Virchowi hodie, Berolini in novissimo propemodum Scientiarum omnium Capitolio, supremi tribuuntur honores. Immortali igitur lauro, fronte tua redimita, neque splendidiore humanae justitiae, neque jucundiore nobis fulsit unquam dies. Quapropter in tanto doctissimorum virorum tibi plaudentium atque gratulantium Senatu, et ego plaudens atque gratulans, quae per te Italia sentit, promere jubeor.

Primum tibi Victorii Emanuelis tertii, amatissimi Regis nostri, nomine loquor, qui fortibus et bonis natus praestanti juventute florens, omnigenae virtutis fulgore, undecumque niteat, trahitur suapte natura. Deinde Ministrorum Regis Consilii nomine in quo praesertim et qui medicinam politicam hodie feliciter tuetur; et qui studiis Italicis ingenio singulari praest, volunt singulariter memorari.

At supereminens omnes, Joseph Zanardellius, libertatis in lege assertor invictus, Consilii Praesul, tibi gloriosissimo affert sua vota per me. Et bene est: tu enim cunctis mirificam intulisti laetitiam, octagesimum annum natus, studiis laboribusque nunquam fractus.

Quam vero doctrinam disciplinamque Anatomes pathologicae Joannes Baptista Morgagnius, felici ausu, primus in Italia instituit ac tradidit, tu singulari sapientia in Germania tua perfecisti, eoque egisti ut Magistrorum Magister jure vocaris. Hoc Itali picturae traditum voluere et ego hexametrum supra tabulam scripsi:

"Ut quos corda fovent, praesentes lumina spectent."

Io, igitur, triumphe, Rodulphe Virchowi; Nestoreos vive per annos, incolumis florens, terque quaterque beatus. Vive, patriae tuae decus et lumen; vive, humani generis praesidium, vive nationum omnium admiratio, vive Italiae amor, vive immortalis!

TRANSLATION.

For the prosperity of the Republic of Medicine throughout the world and for the best interests of Germany the highest honours are vouchsafed to thee, Rudolf Virchow, to-day in Berlin, where Science, in well-nigh all her branches, holds her latest seat. No day has ever shone with purer lustre for the cause of humanity, or with livelier pleasure for ourselves than this, which sees thy brow enwreathed with undying laurel. So amid the plaudits and congratulations of this august concourse of the learned, I too join in applause and congratulations, conveying, on the mandate of Italy, the sentiments she entertains towards thee.

I speak first in the name of our well-beloved King Victor Emmanuel the Third who, sprung from brave and honourable ancestors, with the dew of his youth yet upon him, and radiant with the lustre of every manly virtue, is drawn to thee by his own august nature. Next in the name of His Majesty's Ministers, among whom, in particular, the Minister who happily presides over State Medicine, and his colleague who with rare skill superintends Italian Education, desire to be individually commended to thee.

But, above all, His Excellency Joseph Zanardelli, the indomitable vindicator of "Liberty within the Law," the Prime Minister of Italy, conveys to thee his cordial good wishes through me. Appropriately so; for in thy eightieth year, with strength unimpaired by studious research and by energetic action, thou inspirest us all with equal wonder and delight.

In truth the theory and practice of pathological anatomy, first in Italy imparted and diffused with happy initiative by John Baptist Morgagni, has by thee, in thy native Germany, been carried to such rare perfection that thou hast justly earned the title of Master of Masters. This achievement Italy desires to commemorate by the painter's art and I, on the picture, have ventured to inscribe the hexameter—"that the eye may behold him as present whom the heart cherishes."

So then, "Io Triumphe!" Rudolf Virchow. Live, through the years of a Nestor, in health and energy, thrice, aye four times, happy. Live, as thy country's ornament and light; live, as a safeguard of humanity; live in the admiration of all nationalities; live in the imperishable love of Italy!

The following telegram, also in Latin, has been sent to Professor Virchow by the president and vice-president of the Federal Council of the Medico-Chirurgical Orders of Italy:—

Prof. Rodolfo Virchow, Berlino.

Durante, Bastianelli, Sciamanna, Spaziani, Topai, Praesides foederati consilii Italicorum medicorum ordinum, plaudentes, tibi, pathologorum principi, salutem dicunt, eo temporis momento, quo omnes orbis terrarum medicinae cultores suam quisque admirationem verbis effingunt—voti expetentes ut altiora tua studia magis magisque efficax artis medicae officium sint redditura.

Dabant Roma a. d. IV Idus Octobres A. P. Chr. n. MDCCCCI.
12. X. 901.

[TRANSLATION.]

To Professor Virchow, Berlin.

Durante, Bastianelli, Sciamanna, Spaziani, Topai, presidents and vice-presidents of the Federal Council of the medico-chirurgical orders of Italy, salute and applaud thee, prince of pathologists, on this day when all the votaries of the healing art throughout the civilised globe convey to thee in words their admiration of thee collectively and individually, in the hope and desire that thy researches, prosecuted with ever greater profundity, may render the function of medicine yet more and more effective.

Rome, Oct. 12th, MDCCCCI.

On the evening of Sunday, Oct. 13th, Professor Virchow was present at a birthday dinner in the Palace Hotel, Lord Lister and Sir Felix Semon being among the guests. In the Schellingstrasse, where his residence is, the houses were illuminated in his honour.

THE NEW PATHOLOGICAL LABORATORIES AT THE UNIVERSITY OF OXFORD.

ON Oct. 12th, an appropriate date, being the birthday celebration of Professor Virchow, the new pathological laboratories of the University of Oxford were opened. Among those present were the Vice-Chancellor of the University, Mr. D. B. Monro, Provost of Oriel (who presided), Sir William Church, Bart. (President of the Royal College of Physicians of London), Sir J. Burdon Sanderson, Bart. (Regius Professor of Medicine), the Warden of All Souls', the Dean of Christ Church, the Rector of Lincoln, the Master of Pembroke, the Provost of Queen's, the Principal of Brasenose, the President of Magdalen, the Warden of Keble, Dr. G. Sims Woodhead (professor of pathology in the University of Cambridge), Mr. W. Bruce Clarke, Dr. F. H. Champneys, Dr. J. F. Payne, Professor Arthur Thomson, Professor E. B. Poulton, Professor W. Odling, Professor W. Esson, Professor J. McFadyean (Royal College of Veterinary Surgeons), Dr. H. D. Rolleston (St. George's Hospital), Mr. Horatio Symonds, Dr. James Ritchie (reader in pathology), the Senior and Junior Proctors, Professor Wright, Professor E. J. McWeeney (Dublin), Dr. H. P. Hawkins (St. Thomas's Hospital), Dr. J. W. Washbourn, Dr. W. Bulloch and Dr. G. Schorstein (London Hospital), Dr. M. S. Pembrey (Guy's Hospital), Dr. Ogle, Dr. S. West, Dr. Theodore Williams, Professor R. F. C. Leith (Birmingham), Professor Sheridan Delépine (Manchester), Dr. J. Neil, Mr. A. J. Freeborn, Mr. W. W. Fisher, Mr. P. F. Willert, and others.

The buildings stand in the museum grounds and a full account of them, together with plans, appeared in THE LANCET of June 23rd, 1900, p. 1823. The architect was Mr. J. A. Souttar of Bishopsgate-street, London, E.C.

The VICE-CHANCELLOR, having referred to the growth of natural science study in the University and to the good work done by the late Regius Professor of Medicine and the late Professor Rolleston, called upon Dr. J. Ritchie, the reader in pathology, to give some account of the work.

Dr. RITCHIE said it was natural to think of the time when the University voted the money for the building of a department of pathology, and in carrying out the work the University had the advantage of the experience and advice of two of its members, than whom there could not be greater experts in the details of such work. One was the Regius Professor of Medicine who not only looked upon the scheme from the standpoint of his official position, but all along he had given to it the advantage of the vast stores of experience that he possessed as to what ought to be provided in such a department. The other gentleman to whom the University owed much in this connexion was Professor Arthur Thomson. In the actual building fabric they had two things to keep in view, two objects for which such a building ought to be made available. The first was to meet the requirements of those preparing for graduation in medicine. The University of Oxford had by recent regulations made the subject of pathology one of very great importance in the second Bachelor of Medicine examination, which was such as was required in very few examining institutions in this country. Therefore, the first thing they had to think of was the proper provision and accommodation for teaching the subject, and so they had that lecture-room and other rooms which were necessary for students to obtain that practical acquaintance with the details of the science of pathology on biological lines which they ought to have. The greater part of the necessary studies along these lines was of a microscopical nature, and therefore they had to provide rooms where the students could become practically acquainted with the subject. They had had to make provision also for students obtaining an adequate knowledge of the bacteriological department. One matter which they had to consider very seriously was that the standard for graduating in medicine in the University was very high, and they had had to face the question of the possibility of many men coming back here to work after having graduated. Here, therefore, was provided a complete chemical laboratory where researches could be carried on; they had tried to meet the actual requirements of every branch of research or to arrange matters so that any requirements could be very easily met in the future. They had also had to make provision for the accumulation of specimens the custody of which the University had made over to this department. Upon this point he should like to refer to the intimate connexion which had been made between the Radcliffe Infirmary and this department, and they hoped that the work would be for the benefit of the inmates of the Radcliffe Infirmary, as a great part of it would be in the way of confirming the diagnosis of the medical staff. Dr. Ritchie concluded by referring to the admirable manner in which the architect had designed the building and to the munificence of Dr. E. R. Frazer, of Balliol College, who had given £5000 towards the expenses.[1]

Sir W. S. CHURCH, Bart., President of the Royal College of Physicians of London, next delivered an address. He traced the teaching of modern medicine in Oxford from the time that Sir Henry Acland brought the museum into being and made a graceful reference to the occasion on which they were met, being also the day on which the eightieth birthday of the Nestor of Pathology, Professor Virchow, was being celebrated. Pathology and physiology were interdependent. The days of opposition to the study of the natural sciences in the University had, happily, long since passed away, and they were more nearly approaching the ideal the originators of the museum had before them. But yet much remained to be added before the University was fully equipped for, to use the words of Mr. Ruskin, "the reverent and earnest study of nature and of man, to the glory of God, to the better teaching of the future, to the benefit of our country, and to the good of all mankind."

Professor G. SIMS WOODHEAD, Professor of Pathology at Cambridge University, after announcing that a telegram of heartiest greetings had been sent from the meeting to Professor Virchow, congratulated the University on her new Laboratory.

The REGIUS PROFESSOR OF MEDICINE, in moving a vote of thanks to the Vice-Chancellor, said it was a fact of happy augury that he was the grandson of that Professor Alexander Monro who founded both the Edinburgh Infirmary and the Edinburgh Medical School.

NOTIFICATION OF DEATH TO THE CORONER.

WE have received a voluminous correspondence which was evoked by the preliminaries of the inquest on the late Right Hon. W. W. B. Beach, M.P. It will be recollected that this gentleman, who had attained a great age, was thrown out of a hansom cab in Parliament-street on August 2nd and died at 8.45 P.M. on August 3rd in Westminster Hospital, to which he was admitted immediately after the accident. Here it is well to point out that August 3rd was a Saturday and August 5th was a Bank Holiday. On the evening of August 3rd the

[1] THE LANCET, July 7th, 1900, p. 39.

house physician, Mr. A. R. Roche, drew up a properly-worded intimation of the death and sent it to the private residence of Mr. Troutbeck, coroner for Westminster. The next morning (Sunday), hearing that the coroner was out of town, he obtained his temporary address and telegraphed the facts of the case. About 11 A.M. on August 5th a reply was received from the coroner stating that an inquest would be held on August 7th, and in answer to this Mr. Roche telegraphed that decomposition was setting in. On August 7th, before the inquest commenced, the coroner, we understand, sent for Mr. Roche and in a private room spoke to him in a manner which he (Mr. Roche) resented as "unjustifiable." Mr. Roche very properly refrained from any contention with the coroner and confined himself to sending to the hospital secretary a written statement of the circumstances as seen from his point of view. The secretary's reply to this communication contained the passage, "I am directed to inform you that the House Committee consider that your action in communicating with the coroner regarding the death of Mr. Beach was entirely correct," a sentiment which was repeated in other words at a later stage. It appears that the coroner for Westminster considers that information of a death ought to be given not to the coroner himself but to the coroner's officer. The authorities of Westminster Hospital have, however, been guided by the strict letter of the Coroners Act, and on August 15th the secretary wrote to the coroner that it had been "the practice at this hospital for the past 24 years, and doubtless for a very much longer period, to give information to the coroner direct." The reply was as follows :—

Coroner's Office, Phillimore Chambers,
21, Great Smith-street, S.W.
16th August, 1901.

S. M. Quennell, Esq.

Dear Sir,—To deal with the question of construction of an Act of Parliament first. I fear that the logical position in which you have placed yourself is untenable.

The Act does not refer to the coroner's officer, therefore there is no officer! Such is the argument.

The proper way to inform the coroner is to do it in the manner in which he asks.

The proper course has been pointed out many times. It is the course adopted with great success by other hospitals.

Unless and until these notices are sent from the secretary's office at once directly to the officer there always will be confusion. The resident officers are not instructed by anyone in these duties, and, of course, they bungle like any other inexperienced young men.

It must obviously cause delay not to send direct to the officer, because a report must be made in each case by him to enable the coroner to make his decision. The other matter of the particular case of Mr. Beach is far more serious than you appear to be aware of.

Owing to the action of the house physician in not reporting this death to me or to the officer or any other person until by telegram on Sunday afternoon, when, as he admitted, he knew it could not reach me until Monday morning, complaint has been made of the delay to the Home Secretary, and Sir Michael Hicks-Beach tells him that the coroner was informed "at once" of the death, and that reasons were given then for taking the inquest very soon. Both of which statements are untrue. Now these statements could only be made by a man in his position on the strength of information given by some person at the hospital.

I want an explanation of the whole circumstances.

I also think that the House Committee ought in their own interests to ascertain how such statements came to be made.

The reason alleged for the hurry being that the body was decomposing makes the position all the more inexplicable, since this body was actually left in the hospital full of patients in an open coffin to within a quarter of an hour of its removal for the purpose of the inquest on Wednesday.

If it is true that putrefaction had set in, as alleged, on Monday morning, it is perfectly disgusting that the house physician did not insist upon the body being removed to the parish mortuary at once.

Yours faithfully,
J. TROUTBECK,
Coroner for Westminster.

From inquiries which we have made there would seem to be no doubt that, technically speaking, notice of death should be given *to the coroner*, but that, as a matter of fact, this is seldom done anywhere, as in practice it is found to be very inconvenient and often to cause delay in the holding of an inquest. The practice generally adopted is to notify the coroner's officer who at once makes inquiries and reports the facts to the coroner for his decision. By sending directly to coroner the necessity arises of forwarding the letter to the officer, who may not receive it till the next day, and then he may have to make inquiries and to report to the coroner on the following day, thus causing two days' delay, which may be very unpleasant for the relatives.

As we have said above, the practice at Westminster Hospital is to give information directly to the coroner, but it is evident that to the coroners generally this practice does not commend itself, and perhaps not without some cause, for there does not seem to be any particular reason, save always the verbatim interpretation of the words of an Act of Parliament, why hospital authorities should not notify the coroner's officer instead of the coroner himself. Therefore we can to some extent understand the position taken up by Mr. Troutbeck in his letter, which, however, bears traces of having been written in haste and is certainly lacking in urbanity. It should be explained that the hospital authorities deny that the body was "left in a hospital full of patients in an open coffin," and the House Committee informed the coroner that he was "mistaken in suggesting that it was perfectly disgusting to allow the late Mr. Beach's body to remain in the hospital for so long a period." The body lay in a mortuary chapel which is completely cut off from the hospital proper and the coffin was screwed down on the morning of Monday, August 5th. It was more in harmony with the wishes of Mr. Beach's family that the body should remain there than be removed to the parish mortuary.

At one hospital we are informed that the authorities have a special card printed, which is filled up in the steward's office, giving the necessary particulars, and is then sent directly to the coroner's officer. Some such arrangement as this is, we think, the best one to adopt and would have saved the unpleasantness to which we have referred. Mr. Roche merely followed the custom in vogue at his hospital and no blame can attach itself to him. But it would be well for the hospital authorities on the one hand, and the coroner on the other, to come to some mutual understanding as to the course to be pursued in the future.

SANITARY WORK IN THE PORT OF LONDON.

DR. WILLIAM COLLINGRIDGE, the recently-appointed medical officer of health of the City of London, was previously for a period of 20 years medical officer of health of the Port of London—namely, from 1880 until the year 1901 was somewhat advanced. He is therefore the author of the report of the medical officer of health of the Port of London for the half-year ending June 30th, 1901, and he prefaces it with a brief historical retrospect. In 1880 the medical staff consisted of a medical officer of health and a medical practitioner who gave a portion only of his time to the care of patients admitted into the hospital ship *Rhin* lying off Gravesend. At the present date the medical staff consists of a port medical officer, three boarding medical officers at Gravesend (one of whom is in charge of the hospital on shore), and one medical officer stationed at Sheerness. During the year 1880 there were 16,341 vessels inspected; during 1900 this number had risen to 31,224. In 1883 the boundaries of the jurisdiction of the port were greatly increased and were made to include the mouth of the Medway. To meet the wishes of the Rochester port authority by inspecting all vessels arriving from foreign voyages, a medical officer has been stationed at Sheerness who boards all vessels reporting. In 1892 the great development of the port sanitary authority took place. Cholera appeared on the continent, and the Customs had no means of coping with the imminent danger of importation of this disease. A medical officer was, therefore, stationed on the Customs' hulk off Gravesend, whose business it was to visit every vessel on arrival, and what was only intended as a temporary measure became a permanent one, the whole of the machinery for dealing with infectious disease passing from the hands of the Customs to the corporation as port sanitary authority. The Public Health Amendment Act of 1896 abolished the last vestige of quarantine and laid the whole duty of the protection of the ports of this country upon the local authority, acting under the supervision and control of the Local Government Board. The report for the half-year ended June 30th, 1901, with its appendices fills 60 large pages. It shows that during that period 16,376 visits of inspection were made to vessels of all classes within the port, 7361 lying in the river and the remainder in the various docks. Of the total number, 13,433 (equal to 82 per cent.) carried the British flag, the Norwegian coming next in numerical order with 1020 (equal to 6 per cent.). The boarding medical officers at Gravesend visited 5141 vessels, 476 of which were medically inspected, this involving the personal inspection of 13,255 passengers and 35,626 persons forming the crews. The cases of infectious disease dealt with were 157 in number—namely, eight of small-pox, four of scarlet

fever, 18 of diphtheria, 28 of enteric fever, 80 of measles, and 19 of other infectious diseases. Ten men forming part of ships' crews were found to have enlarged or suppurating inguinal glands and as a precaution against plague were removed to the port sanitary hospital for observation, but bacteriological examination gave negative results. Dr. Collingridge quotes the memorandum of the Local Government Board relative to ship-borne rats and plague, and devotes several pages to this question. Experiments, he says, have been made by the Clayton Fire Extinguishing and Ventilating Company, Limited, one being on the s.s. *Manora* in the Royal Albert Dock. The vessel was empty at the time and the method consisted in pumping sulphurous acid gas from a special apparatus into the hold. This system is effective in destroying rats and has the great advantage of limiting the risk from fire which always obtains when sulphur is burned on shipboard, but it may be detrimental to the cargo. On the *Manora* 303 dead rats were found after treatment of the vessel. Experiments with the cocco-bacillus of Dr. Danysz were made in the Royal Victoria and Surrey Commercial Docks. Bread soaked in the virus, and also the bodies of guinea-pigs and mice which had died from inoculation with the bacillus, were deposited in the warehouses and were devoured by the rats but without producing any observable effect on them. Large numbers of rats were, however, destroyed by means of traps and poison. From Feb. 28th to June 30th the total so destroyed was 32,008, of which about 20,000 were killed on board vessels and about 12,000 in warehouses.

THE POST-GRADUATE COLLEGE, WEST LONDON HOSPITAL.

THE new college building of the Post-Graduate College at the West London Hospital, Hammersmith, was formally opened by Sir WILLIAM MAC CORMAC, Bart., K.C.B., K.C.V.O., on Oct. 14th in the presence of a numerous company.

Sir WILLIAM MAC CORMAC in the course of his address said that they had not yet reached the condition denoted by that somewhat misused term "perfection." They would continue in the future to realise further progress just as they had realised advances in the past. Medicine was a progressive science and those who practised it could not stand still. They must ever continue to learn; indeed, they all must do so unceasingly if they would not be hopelessly left behind, and in an institution like that which they were in the opportunity was given. The staff of the West London Hospital was young and energetic and might well be congratulated on the progress which it had made. Many years ago there was some question of establishing a complete medical school, but the plan was, fortunately, abandoned, since there were a sufficient number of such institutions in London and the cost to the smaller schools of teaching subjects like chemistry, anatomy, and physiology was practically prohibitive. The much more promising project of a post-graduate school subsequently took place, and from small beginnings, consisting in the delivery of weekly lectures without any clinical advantages, had now achieved a very considerable success. A feature in the school was that it was reserved exclusively for qualified medical men. Unqualified students were not taught by their side, nor, indeed, would the same class of teaching be suitable for both. The natural diffidence of the older student was spared the comparison of his own mistakes and shortcomings with the complete absence of any such weakness in his younger brother. The wards and hospital practice were open to all the post-graduates. Special clinical lectures were given, lectures were daily delivered in the lecture-room, and classes of instruction in various special subjects had been formed, limited in each instance to 10 persons, who could thus readily acquire the knowledge they desired. All this had been proved to be of great service to a large number of general practitioners of London and the suburbs, and to country medical men as well, who found the opportunity of doing occasional hospital work useful and agreeable. Many officers of the navy and army had availed themselves of the opportunities here afforded. Work of a similar kind was being done elsewhere, but the West London Post-Graduate College was the only one enjoying the advantage of a close connexion with a general hospital, and the only one where the practice was reserved for the benefit of qualified men alone. Opportunities were given to the students of personally examining the patients before the cases were discussed, and those interested in surgery could assist at operations in the theatre and do work as dressers in the wards. A considerable number of the medical officers serving in South Africa had previously attended the post-graduate instruction there, and had written in terms of grateful acknowledgment of the value it proved to them. Nearly all of these officers attended without having previously obtained any leave from their ordinary duties, which had to be attended to. Some of them came three or four times a week from places like Aldershot, Chatham, and Woolwich, at much personal inconvenience to themselves, and several naval medical officers during their leave ashore had also attended to their great credit. The need for the school would be more and more recognised, not only in the medical element of the public services, for whom study leave in the near future should be a recognised institution, but for civil practitioners as well. When the medical history of the war came to be written justice would be done to the medical officer, who had displayed a complete devotion to duty and a complete self-sacrifice. He accomplished much, and in an admirable manner, under restrictions and difficulties which it was very hard adequately to appreciate, and the results accomplished would bear the most favourable comparison with those of any other war or expedition, and, as recently seen in China, with the medical services of other nations. The war had caused the generals and commanding officers to see with their own eyes what medical officers did, and there had been many strongly commendatory reports sent home, while very generally a greater sympathy and appreciation had been shown by the combatant ranks for the work of their medical brethren. In regard to the manner in which the medical staff as a whole acquitted themselves in the face of the tremendous responsibility which they had suddenly to face Lord Romer and his colleagues on the South African Hospitals Commission had vindicated the high reputation of the Army Medical Corps. If there were failure in some instances the cause was the pressure of circumstances which baffled the devotion of the medical officers. Some means should be devised for removing the Army Medical School from its isolated position at Netley to London, where they would feel the constant stimulus of competition and of criticism, and be made free to benefit by the unrivalled teaching and clinical opportunities which the great city afforded. If a great military hospital and school of the most modern and complete type were established in London, and a body of teachers similar to that of the Kaiser Wilhelm Institute in Berlin, where post-graduate instruction of the army medical officers was most complete, were appointed in connexion with it, a more widely reaching influence would be exerted for the improvement and advancement of the medical department of the army than any other single measure could accomplish. It would enable a considerable proportion of the army medical officers to keep in touch with the scientific work of the London schools and Netley Hospital could still be used for the reception of invalids from abroad. That or any other suggested improvement altogether depended on the ability of the authorities to fill up the vacancies in the department and to create a medical corps of sufficient number. The scheme would probably be the means of effecting a closer relationship between the military and civilian members of the profession. In the South African war the services of civilian practitioners were largely drawn upon, and that would be the case in any future war.

REPORT OF THE COMMISSIONERS IN LUNACY FOR SCOTLAND.

IN the forty-third annual report of the Commissioners in Lunacy for Scotland it is stated that the number of the insane in Scotland on Jan. 1st, 1901, under official cognisance was 15,899. Of this number 2395 were private patients, 13,458 were paupers maintained by parochial rates, and 46 were maintained at the expense of the State. In January, 1858, when the Commissioners in Lunacy for Scotland entered on their functions, the total number of lunatics officially known to the board was 5824, and since then the number of lunatics under their jurisdiction has increased

to two and three-quarter times the original number. The increase of the population during the same period has been 42 per cent. "The proportion of all pauper lunatics per 100,000 of population shows an almost steady increase since 1858 and at the beginning of this year attained its highest figure of 308," as against the next highest, 304, which was attained last year. As regards the number of persons admitted into asylums, excluding mere transfers from one institution to another, it is shown in Table VII. of the report that the number of private patients admitted during the year 1900 was 542, being 20 less than in the preceding year and one more than the average for the quinquenniad 1895–1899. The number of pauper patients admitted during the year 1900 was 2899, being 31 more than the number during the preceding year and 160 more than the average for the quinquenniad 1895–1899. During the year the total number of pauper patients discharged as recovered amounted to 1276, or 12·2 per cent. of the average number resident. The number of deaths in the same class of patients was 958, or 9·2 as calculated on the same basis. Of a total of 102 accidents reported as having occurred to patients during the year, in 13 cases the termination was fatal, death in four of these cases being due to suicide by hanging or cutting the throat. In one case of suicide by a patient leaping into a river the nurse, Miss Isabella Sime, also lost her life in an heroic effort to save the life of the patient under her charge. In 48 cases the accidents involved fracture of bones or dislocation of joints, and in 23 cases injuries to the head. There are two training schools for imbecile children, one at Baldovan and the other at Larbert. These institutions receive between them about 380 children, but both appear to be overcrowded, and further accommodation is needed. In Section X. of the report the commissioners deal with the question of general paralysis. During the five years 1896–1900 the total number of deaths from general paralysis amounted to 667, including 550 males and 117 females. Of the male patients, 40 per cent. had died from the disease between the ages of 31 and 40 years, and 39 per cent. had died between the ages of 41 and 50 years. For females the corresponding proportions were 39 per cent. and 33 per cent. Comparing these figures with those of the decennium 1865–1874, it appears that some support is lent to the view that there is an increase in the number of deaths from general paralysis during early adult life and the middle periods of life—i.e., in the decades 31 to 40 and 41 to 50 years. Of the total 667 patients who died from general paralysis during the period 1896–1900 the length of residence in asylums was three years and under in 605 cases, or 91 per cent. In 54 cases the duration of residence was from three to five years, in seven it was five to 10 years, and in one case it was over 10 years. The expenditure on maintenance per head of pauper lunatics has risen steadily since 1895, and the rise still continues. The expenditure for the purchase of land and the erection of asylums also continues to increase year by year without abatement.

THE THIRTIETH ANNUAL REPORT OF THE LOCAL GOVERNMENT BOARD, 1900-1901.

I.

THE FOOD AND DRUGS ACTS AND THE QUALITY OF THE METROPOLITAN WATER-SUPPLY.

THERE are certain fresh features in the sections of the annual report of the Local Government Board just issued relating to the administration of the Food and Drugs Acts and to the metropolitan water-supply which are of interest and worthy of note. The Sale of Food and Drugs Act of 1899—a really important addendum to the existing laws—came into operation on Jan. 1st, 1900, and seeing that this Act contained several important changes in the law relating to adulteration of food it is interesting to learn in what manner the new legislation has affected the administration of this important department of public service. The chief result would appear to have been—and that is satisfactory so far as it goes—that many more samples have been taken for analysis. Indeed, during 1900 many local authorities for the first time in their existence obtained samples for analysis, whilst others have been induced largely to increase the number hitherto taken. It is with considerable satisfaction that we note that the Local Government Board have at length stirred up those authorities of districts in which the work done was inadequate, urging upon them to exercise the powers entrusted to them by the legislature for the suppression of adulteration. It is to be hoped that this activity in thus reminding the authorities of the duty specifically cast upon them will be maintained, for we cannot admit even now that the number of samples analysed in relation to the population is sufficient. Moreover, with the increase of the number of samples taken for analysis there invariably appears a decrease in the number of samples found to be adulterated. The past official year again gives evidence of this fact, for something like 10,000 samples in excess of the number taken in the previous year were obtained for analysis and the result shows a diminution in adulterated samples of 0·6 per cent.; that is to say, the percentage adulterated in 1899 was 9·4, while in 1900, with 10,000 more samples taken for analysis, it was 8·8. The number of samples examined was 62,858, of which 5503 were reported against and proceedings were instituted in respect of 3321. Just as there has been a decrease in the number of metropolitan medical officers of health consequent on the operation of the London Government Act, 1899, so there has been a similar decrease in the number of analysts for metropolitan boroughs. The number of analysts whose appointments were approved by the Local Government Board was 237. As in previous years the bulk of the samples analysed consisted of milk, the proportion reported against (namely, 10·8 per cent.) being slightly higher than the average of the previous six years—a result which may be attributed to the remarkable drought. It will be interesting to learn in what way the rate of adulteration of milk will be affected by the recent adoption of a standard for milk. To some extent the important increase in the total number of samples analysed was due to the occurrence of arsenic in beer in Manchester and certain other places in November last year. It is satisfactory to record that the analytical equipment of the country proved equal to the occasion and "within 30 hours," writes the analyst for Lancashire, "of the source being made known in the neighbourhood of Liverpool samples of glucose and of beer were in the hands of the public analyst. Within a few days most of the dangerous glucose was withdrawn from use. In less than three weeks most of the beer in and near large towns was either destroyed or withdrawn from sale prior to destruction, and although in places more remote from the centre of activity and from the great brewing centres the harmful beer lingered longer, yet after three weeks there was only here and there a sample to be found in the country districts." During the year no less than 4559 samples of beer were thus submitted to analysis. A curious and contemptible mode of adulteration is reported by the analyst for Cornwall. He noticed that a portion of a small cheese submitted to him had an unusually thick rind. While the cheese itself would have been passed as genuine the rind was found to contain no less than 69 per cent. of barium sulphate, a very heavy white substance. There is no doubt that as cheese is sold by weight the barium sulphate was added to increase its weight.

We note with satisfaction that Dr. Thorpe has considered it advisable in the public interest to institute a tri-weekly examination of the metropolitan water companies' supplies instead of a monthly chemical examination as was the plan pursued by his predecessor, the late Sir Edward Frankland. Further, samples are now collected at various points in the districts supplied by the different companies and not as hitherto always from the same place. We have urged the desirability of this plan of control repeatedly in our columns. Dr. Thorpe admits, however, that the tri-weekly examinations are only partial, being confined to the determinations of the amounts of oxygen consumed and albuminoid ammonia, these data affording, in Dr. Thorpe's opinion, trustworthy indications of the variations in the proportion of organic matter present in the waters. At the same time when the samples were not perfectly clear the turbidity was examined. The monthly analyses reported by Sir Edward Frankland were laborious on account of his confidence in the method known as the combustion method for the determination of the organic carbon and organic nitrogen in the water. Sir Edward Frankland, as was well known, would not recognise that the albuminoid ammonia process was of any value. Thus the

difference of opinion on this point between Sir Edward Frankland and Dr. Thorpe has enabled the latter to undertake the analyses of water more expeditiously by adopting the quick albuminoid ammonia and oxygen absorbed processes in place of the tedious combustion process. In our opinion the number of samples submitted to analysis might be further increased with advantage and the results should be published without unnecessary delay. Dr. Thorpe, however, by no means belittles the combustion process for the determination of organic carbon and organic nitrogen, for he says that the results gained are of great value as they afford the chief data on which the probable origin of the organic matter is determined. But the process takes time. During the year there were a number of occasions when sensible turbidity was observed in the waters, but in nearly all cases the turbidity was very slight indeed and consisted mainly of rust-stained particles in all probability introduced by the disturbance of the water. 14 out of 16 samples of the Grand Junction Company's water collected during the months of August, September, October, and November, were distinctly opalescent with very finely divided oxide of iron due, as was afterwards explained by the engineer, to the proximity of the collecting place to the dead end of a main. The defect was subsequently remedied, as shown by the later samples drawn being almost invariably clear. It is regrettable, we think, that bacteriological examinations are omitted, although Mr. Perrin, the official water examiner, expresses the hope that the recommendations of the Royal Commission presided over by Lord Llandaff, to the effect that small bacteriological experimental works should be established in order to ascertain what processes of treatment give the best results and what bacterial standard of effectual filtration can be reasonably adopted for practical use, will receive the early attention of the companies concerned. Dr. Thorpe remarks that it is obvious that the organic matter present in the raw Thames and Lee waters must be partly of vegetable and partly of animal origin, as the surface and other drainage from the cultivated land and the effluents from the sewage works of towns situated on or near the rivers are discharged into the streams. He admits that under ideal conditions the use of water subject to such regular pollution would be avoided, but adds the very safe remark that provided certain flood water is excluded and provided that after proper storage the water is efficiently filtered the risk of danger to the public health through consuming such water is reduced to a minimum if not to zero. Of course, it is a well-known fact that the water-supply of London drawn from the river Thames and the river Lee has only been and is only now made safe for drinking purposes by efficient filtration, and since that is so, it is most important that the filtration processes should be closely studied and watched and kept under the strictest possible control.

MEDICAL SCHOOL DINNERS.

St. Bartholomew's Hospital.—The annual old students' dinner took place in the Hospital Hall on Oct. 1st, when 158 sat down to dinner, Mr. W. J. Walsham being in the chair. Among the guests were Sir Trevor Lawrence, Sir William Mac Cormac, the Hon. John Collier, Sir Henry Norbury, Professor Clifford Allbutt, and the Principal of the London University. The event of the evening was the presentation to Sir Thomas Smith of a subscription portrait painted by the Hon. John Collier. The Chairman, in presenting it, expressed the double feeling which inspired the subscribers of admiration for Sir Thomas Smith's professional qualities and affection for his personal qualities. Sir Thomas Smith begged Sir Trevor Lawrence to accept it on behalf of the Governors and proposed the painter's health. The toast of "The Services" was proposed by Mr. Bowlby, and replied to by Sir Henry Norbury, K.C.B., Director-General of the Royal Navy, and Colonel Hendley, I.M.S. Sir T. Lauder Brunton proposed "The Visitors," to which Professor Clifford Allbutt and the Principal of the London University replied.

Charing Cross Hospital.—The annual dinner of the past and present students of the Charing Cross Hospital was held on Oct. 2nd in the Victoria Hall of the Hotel Cecil. The chair was taken by Mr. C. Gibbs. The guests, who numbered over 250, were able to converse with one another after the dinner, for which unusual facility they had to thank the honorary secretaries, Dr. H. S. Clogg and Dr. W. H. Unwin, who had arranged a short toast list. Professor Taylor proposed "The Staff of Charing Cross Hospital and Medical School," to which Mr. J. A. Bloxam replied. Dr. Eden in a witty speech gave "The Past and Present Students," which was replied to by Mr. Hopewell Smith and Mr. G. E. Bellamy. The toast of "The Visitors" was given by Mr. F. C. Wallis and was responded to by Mr. Anthony Bowlby.

St. George's Hospital.—The annual dinner was held at the Whitehall Rooms on Oct. 1st. The chair was occupied by Mr. J. Warrington Haward, consulting surgeon to the hospital, and 130 guests were present. The chairman proposed the usual loyal toasts and also that of "The Medical School." Dr. Isambard Owen, the dean of the school, responded for the latter. The health of Dr. P. W. Latham of Cambridge, who had given the introductory address but was unfortunately prevented from attending the dinner, was proposed by Dr. W. H. Dickinson. Mr. A. Marmaduke Sheild proposed "The Past and Present Students," the toast being responded to by Dr. F. M. Hawkins and Dr. W. L. Ascherson. "The Health of the Governors" was proposed by Mr. Turner and replied to by Mr. Holmes, the treasurer of the hospital. The deputy treasurer, Mr. A. W. West, proposed "The Health of the Chairman." The guests included the senior physician and senior surgeon, Dr. W. Ewart and Sir W. H. Bennett, and other members of the acting and consulting staff, together with Surgeon-General Penny, Deputy Inspector-General Wood, Colonel H. E. Drake-Brockman, Colonel Wilson, Colonel A. W. F. Street, and Colonel G. D. N. Leake.

Guy's Hospital.—The annual students' dinner was held on the evening of Oct. 1st and was largely attended. In the absence of Dr. P. H. Pye-Smith the chair was occupied by Dr. F. Taylor. The Chairman, in proposing "The Students' Club," said that there was no doubt about the success of the Students' Club, which was now something like 20 years old. The toast of "Guy's Hospital" was next proposed, coupled with the name of Mr. Cosmo Bonsor. Dr. Taylor said that there was an old saying that "Wherever you go, whether to New Zealand, or Timbuctoo, or Greenland, or Kamtschatka, or even to the North Pole, there you will find a Guy's man." They knew to their cost that there had been a great many Guy's men in South Africa. They might perhaps know that a Guy's man was at that moment accompanying the Duke and Duchess of Cornwall and York at the other side of the Atlantic. Mr. Cosmo Bonsor, in responding to the toast, said that he always considered it a very high honour to have his name coupled with Guy's Hospital. Dr. Taylor had spoken of South Africa, and there was one amongst them that night, Dr. S. E. Denyer, who had been distinguished for having gallantly done his duty in the field there. Last year they had welcomed home from South Africa their friend Mr. A. D. Fripp who had a great deal to do with the Students' Club but was not present with them that night. They were also extremely proud to see Dr. J. W. Washbourn, who had returned home and who made a great name for himself in South Africa and for the school where he learned to work—Guy's Hospital. Their friend Dr. F. E. Fremantle was also amongst them. He could say a great deal about the ladies who had been trained in Guy's Hospital wards, but this he would declare—that at no time in the history of the hospital had it and those connected with the institution been doing a greater work in the cause of humanity and science and civilisation than at present. With regard to the future, they desired that Guy's should take the precedence of every hospital in the world, and they looked to those who had served in the wards and done their duty to the hospital in the past, to provide that one miserable thing, without which they could neither exist nor look forward—namely, money. They knew that so long as all connected with the hospital did their duty they would be supported by the public. Mr. French proposed the health of Dr. Taylor, who briefly replied. Mr. Cosmo Bonsor said that they could not allow Dr. L. E. Shaw to pass from his position as dean of the Medical School without expressing on this occasion their gratitude to him for his past work and their fervent hope that he might have health and happiness in his retirement of *otium cum dignitate*. During all the years that he had been Dean, on these occasions he had been extraordinarily mysterious, and had apparently passed on that tradition to his successor, Dr. J. Fawcett, who would not give him (Mr. Bonsor) the slightest information as to "entry day." Without knowing

in the least what the "entry" was likely to be, he thought they might congratulate Dr. Shaw on what he had done for the school in the past. They were all grateful to him for his work, they would drink his health, and at the same time they would hope that his mantle had fallen successfully on Dr. Fawcett. Dr. Shaw responded, and the singing of "Auld Lang Syne" brought to a close a very pleasant and successful evening.

London Hospital.—The 117th session was opened on Oct. 1st with the usual old students' dinner, which was held in the library of the college, Dr. Frederick Daly being in the chair. 100 old students sat down to dinner. Dr. Daly, in congratulating the old students on the prosperity of the old hospital and college, called attention to the enormous improvements which were now taking place, especially the addition of the new pathological block, out-patient department, isolation block, and operating-theatres. He said that a great deal of the work was now complete, and added that it was probably without precedent that such an enormous amount of work should have been carried on without a single bed being closed, so that the study of medicine and the students' career had not been checked for a single hour. He also called attention to the large number of old students who had been out to the front, particularly alluding to the honours that had fallen to the College by Sir Frederick Treves receiving knighthood and Captain Neville R. Howse (from Australia) the Victoria Cross. Mr. M. Brownfield and Dr. J. Edmunds, old London students who qualified in 1854, said that they perhaps could speak with greater authority on the London Hospital Medical College than anyone else present. Throughout their lives they had felt thankful for the education they had received at their old hospital and for the enormous experience in practical work that they had there gained. Mr. T. H. Openshaw, and others who had recently returned from South Africa, spoke also of the practical work done by London Hospital men at the front. Mr. J. A. Hosker, late mayor of Bournemouth, and other speakers bore tribute to the excellent opportunities afforded by their old hospital and college.

St. Thomas's Hospital.—The St. Thomas's old students' dinner was held at the Whitehall Rooms of the Hôtel Métropole on Oct. 2nd. Mr. H. H. Clutton was in the chair and was supported on either hand by General Sir Ian Hamilton and General Sir Reginald Wingate, the Sirdar. This year a new departure was made in order to give the old students an opportunity of talking with their former companions, for which purpose a conversazione was held in the reception-room after dinner. After drinking the toast of "The King and the Royal Family," followed by that of "Success to St. Thomas's Hospital," which latter was replied to by Mr. T. G. Wainwright (the treasurer) and Dr. H. G. Turney (the dean), Dr. S. J. Sharkey proposed the health of the Chairman, who in his reply proposed that of the secretaries, which was responded to by Mr. E. M. Corner. There were 150 people present and all adjourned to the reception-room after dinner and there ended one of the most pleasant and successful meetings of the St. Thomas's old students. The great success of the conversazione will, it is hoped, lead to still further developments next year.

University College Hospital.—The past and present students of University College Hospital held their annual dinner at the Hotel Cecil on Oct. 1st. The chair was occupied by Sir Richard Douglas Powell who proposed the toast of the evening, "Success to University College Medical School," to which the Dean of the medical school, Professor John Rose Bradford, replied. Amongst the other speakers were Dr. F. Roberts and Sir John Williams. The dinner was well attended, over 120 guests being present.

ASYLUM REPORTS.

Surrey County Asylum, Brookwood (Annual Report for 1900).—The average number of patients resident during the year was 1033, comprising 421 males and 612 females. During the year 285 patients were admitted, 133 being males and 152 females. Of these 239 were first admissions. Mr. James E. Barton, the medical superintendent, states in his report that a female patient admitted from the Richmond Hospital developed scarlet fever five days afterwards. Three other patients and a nurse were attacked and had to be removed to the Cottage Hospital. The admissions were generally found to be "of a bad class as regards recovery. 71 had suffered from previous attacks, and in 53 the insanity was of more than a year's duration." A female patient who was admitted pregnant was confined of a child. Of the causes of insanity in the admissions, worry, overwork, and adverse circumstances accounted for nearly 23 per cent. Alcoholic intemperance and previous attacks were the causes in 35 and 51 cases respectively. "In 18 instances the mental disorder followed an attack of influenza. 14 general paralytics were admitted, all of whom were males, and the majority of these came from the parishes situated on the London side of the county." "There is no doubt," adds Mr. Barton, "that general paralysis has been diminishing in frequency in the rural districts for some years past, and in the female sex it appears to be approaching the vanishing point, only six cases having been admitted during the last five years." The number of patients discharged as recovered during the year was 89—viz., 50 males and 39 females, or 8·6 per cent. of the average number resident. The deaths during the year amounted to 101, including 40 males and 61 females, or 9·77 per cent. as calculated on the same basis. 11 patients died within one month of admission. Of the deaths one was due to myxœdema, two were due to cancer of the liver, three to Bright's disease, seven each to epilepsy and cardiac disease, eight to cerebral hæmorrhage, nine to pneumonia, 10 to organic brain disease, 11 to senile decay, 13 to general paralysis, 16 to phthisis and other forms of tuberculosis, and the rest to other causes. An inquest was held on the body of a male patient who committed suicide by strangulation. "This patient was the subject of melancholia. ..... He was found suffering with an ischio-rectal abscess which was opened. ..... On the following day he was found by the charge attendant on the floor with one of the triangular bandages which had supported the surgical dressing tied tightly round his throat." Only four casualties to patients occurred during the year, three of these being fractures of bones and one a dislocation, all due to accidental falls. A complete fire and domestic service has been laid on to the Cottage Hospital from the water company's main, and the outlet of the asylum drain has been connected with the district council's main sewer so that any excess of sewage beyond what can be beneficially utilised can be turned into the Woking sewer. The erection of additional wards at a cost of £87,000 to accommodate 350 patients was commenced in August, 1900. An outbreak of swine fever occurred at the farm in April, necessitating the destruction of the whole herd. The Commissioners in Lunacy state in their report that the day-rooms were bright and cheerful, the dormitories and bedding neat and clean, and the case-books and post-mortem records carefully kept. They commend the recent addition of another medical officer to the staff, and hope that pathological work will now be undertaken.

Durham County Asylum (Annual Report for 1900).—The average number of patients resident during the year was 1415, comprising 736 males and 679 females. During the year 330 patients were admitted, of whom 165 were males and 165 females. Of these patients 253—viz., 135 males and 118 females—were first admissions. Dr. W. St. John Skeen, the medical superintendent, states in his report that "the admissions were of the usual type and still show a large percentage of aged people; 26 patients were over 60 years of age, of whom four were over 75 years; 72 were admitted in a feeble state, and most of them died soon after admission." Among the admissions were 27 cases of general paralysis. The number of patients discharged as recovered during the year amounted to 149, or 10·5 per cent. of the average number resident. Of 818 patients discharged as recovered during the five years 1896 to 1900 inclusive, 124 have relapsed during the same period. The deaths during the year amounted to 165—viz., 94 males and 71 females, or 11·6 per cent. of the average number resident. Of the deaths, one was due to asphyxia by choking, five were due to cerebral hæmorrhage, eight to epilepsy, 12 to influenza and its complications, 12 to congestion of the lungs, 15 to pneumonia, 29 to general paralysis, 30 to cardiac disease, 34 to phthisis and other forms of tuberculosis, and the rest to other causes. Four cases occurred during the year of serious injuries in the form of fractures sustained by patients accidentally or by being pushed down by other patients, and in three of the cases satisfactory recoveries were obtained. During the year two female patients gave birth to children, in one case a boy and in the other a girl, but in neither case is the mother anticipated to make a satisfactory mental

recovery. The asylum committee state in their report that having regard to the requirements expressed from time to time by the Commissioners in Lunacy of provision at the asylum for the isolation of infectious diseases, the committee have decided to erect a small detached isolation hospital for the purpose. Electric lighting is now in operation throughout the building. The farm has continued to yield abundance of milk, meat, and vegetables, and the whole of the live stock, with the exception of two cows which had to be destroyed, were in good health. The Commissioners in Lunacy state in their report that the wards and dormitories were comfortable, fresh, and clean. They state that Dr. R. Smith, the late medical superintendent, after a long and faithful service of 44 years, has retired on a pension and has been succeeded by Dr. Skeen, the senior assistant medical officer. They regret to find that it is proposed to reduce the medical staff by abolishing the post of pathologist. "This we consider a retrograde step and hope the committee can see their way to reconsidering the matter." They also state that "the insufficiency of the medical staff of late no doubt accounts for the [medical] case-books being considerably in arrears." At a more recent visit (Feb. 15th, 1901) the Commissioners in Lunacy refer to Newton Hall, an annexe of the asylum prepared for the accommodation of 52 male patients from the county asylums, all of whom are of the chronic quiet class, and who appear very healthy and contented in their new surroundings. Three assistant medical officers "are now on duty, and the case-books duly entered up to date."

Royal Edinburgh Asylum (Annual Report for 1900).—The average number of patients resident during the year was 940, comprising 482 males and 458 females. During the year 472 patients were admitted, of whom 248 were males and 224 were females. Of these 117—viz., 55 males and 62 females—were not first admissions. Dr. T. S. Clouston, the medical superintendent, states in his report that the year 1900 has been a record year for admissions, the number of admissions being 38 over the average of the preceding five years. This increase has been entirely in pauper cases, so that scarcely enough room could be found for private cases. A number of chronic insane pauper patients were boarded out during 1899 in other asylums with the view of providing room in the West House of the Edinburgh Asylum for recent and urgent private cases from Edinburgh. But this anticipation was not fulfilled owing to the exceptional increase of pauper patients among the admissions, chiefly from Edinburgh. As regards the cause of such an increase of pauper patients Dr. Clouston thinks that the excessive use of alcoholic liquors has to a large extent been the main factor. "We had, as a matter of fact, 115 cases, or about a quarter of our whole number of admissions, in whom drink was assigned as either the sole or as a contributory cause of the disease. If the admissions of men alone are looked at, 81, or about one-third of them, were alcoholic cases. I have never had experience of anything approaching this before, and I should fail in my duty if, seeing more of the terrible effect of excessive alcoholic drinking in destroying honour and reason and self-control than almost anyone else in Scotland, I did not strongly draw attention to a fact so disgraceful to us as a community. ..... It is certain that for every man in whom excessive drinking causes absolute insanity there are 20 in whom it injures the brain, blunts the moral sense, and lessens the capacity for work. ..... When in any community there is a large class to whom prosperity always means excessive indulgence in drink in defiance of natural and moral law it means that a higher sort of education is needed or that degeneration has set in. ..... A true conception of liberty does not necessarily imply liberty for a man to drink himself to death if he can afford to do so at his own expense or the right to render himself a burden on other people and a source of degradation and danger to the community. ..... Our recent Inebriates Act is almost a dead letter and Lord Peel's report remains as yet an interesting subject of academic discussion. ..... Convictions for being drunk and incapable steadily increase in Scotland; my alcoholic lunatics have risen from an average of 15½ per cent. in the years 1874–1888 to 21½ per cent. in 1889–1898, to 22½ per cent. in 1899, and now to 24½ per cent. in 1900 ..... and yet the politician cries *non possumus*. ..... The national drink-bill steadily goes up and the national degeneration progresses. I am convinced that we shall have a big reckoning to pay some day. ..... A consumptive race might conceivably be cured in two generations, or even in one by good conditions. I do not believe a drink-sodden race could be fully cured in a hundred years. ..... We can, I think, put down most of our 115 alcoholics of the year as being preventable and we can, if the current views of its causation are true, put down almost all our 49 general paralytics as in that list." Many of the patients admitted were suicidal and some were dangerous to others. During the year 165 patients were discharged as recovered, or 17·5 per cent. of the average number resident. The deaths during the year amounted to 99, or 10·5 per cent. as calculated on the same basis. Of the deaths two were due to Bright's disease, five to pneumonia, 10 to cardiac disease, 14 to phthisis and other forms of tuberculosis, 17 to general paralysis, 19 to senile decay, and the rest to other causes. Concerning the high mortality from phthisis Dr. Clouston observes that "many of the patients are very weak indeed on admission. ..... They are liable therefore in an undue degree to fall victims to the tubercle bacillus." The general health of the inmates has been good with the exception of a slight outbreak of scarlet fever in Craig House from infected milk, one sporadic case of typhoid fever in the West House, and one case of small-pox occurring in a patient who had come on a South American steamer. The Commissioners in Lunacy state in their report that the asylum throughout is maintained in excellent order and that the medical case-books and registers are well kept, full accounts being written of the treatment and progress of the various patients under care. The Board of Managers state in their report that there is little prospect of the new asylum for the Edinburgh district being ready for occupation in February, 1902, as was at first calculated, and they "cannot without anxiety contemplate the prospect of having to find accommodation for the ever-increasing number of paupers."

THE FIFTH INTERNATIONAL CONGRESS OF PHYSIOLOGISTS.

HELD AT TURIN, SEPT. 17TH–21ST, 1901.

THE following are some further notes of communications made to the above Congress:—

The Results of Trephining the Cranium of Young Animals.

M. JEAN DEMOOR (Brussels) contributed a paper on the above subject. He said that Danilewsky had found that trephining the cranium of young dogs was followed at a later stage by (1) arrest of development of the limb corresponding to the region trephined; and (2) the supervention of epileptiform convulsions followed by death, generally at the age of six months. M. Demon was able to corroborate the latter result but not the former in its entirety. The wasting was general. The animals developed normally during the months prior to the convulsions, but at the post-mortem examination showed no emaciation or other phenomena indicative of the region trephined. Experiments on rabbits gave similar results. Histological examination of the brains revealed a very marked moniliform condition of the cortical nerve-cells. Stained by the method of Golgi the enlargements were darkly coloured and the intervening strands were pale. This condition was the result of the strong cortical excitation which accompanied the epileptiform convulsions in which the animals died. If killed during the period of wasting the nerve-cell processes were smooth. A marked degree of chromolysis was also seen in the nerve-cells accompanied by a great poverty of chromatic substance which the author regarded as characteristic of the nerve-cells of trephined animals. There was no neuro-phagocytosis present except in one animal when death came on very slowly preceded by a state of imbecility.

Attempts to Educate a Pigeon devoid of Cerebral Hemispheres.

Dr. Z. TREVES and Dr. A. AGAZZOTTI (Turin) had found that after removal of the cerebral hemispheres the animal remained motionless for several days. Then slight spontaneous movements were made and later a few steps. If placed on a small stage the bird dropped off on reaching the edge, but afterwards learned to advance with caution and remained upon it. This indicated some power of perceiving and remembering impressions. The perch was a low platform a few inches square, placed within a fume chamber in the laboratory; when thus far recovered the bird was dropped near its stage and encouraged to return, aid being given at

first. Then the distance was gradually increased about two inches at a time till ultimately at the end of five months it was able to fly back and to hop up upon its perch from a distance of eight metres. Up to this time it was impossible to induce it to fly in a direction away from the chamber or to fly down from a higher to a lower level, but later both these movements were accomplished. At Easter it was taken for a fortnight to Modena, where other exercises were taught, and on returning to Turin it at once found its way back to its old perch when set free in the room. Its acquirements gradually increased, but it never spontaneously left its support or made any attempt to peck at food. In July it was again taken to Modena and attempts were made to educate it to discern colours, but without noticeable success. Unfortunately, the pigeon died in August, nine months after the cerebral hemispheres were removed. A control pigeon, operated upon at the same time, acquired only a very limited power of movement, but was never able to fly or to return to its perch when only placed a few inches distant.

The Effects of Nicotine on Nerve Cells and Nerve Endings.

Professor J. N. LANGLEY, F.R.S. (Cambridge), contributed a paper on the above subject. Nicotine solution applied to a ganglion of the sympathetic prevented, as Professor Langley had previously shown, the passage of nerve impulses from the pre-ganglionic to the post-ganglionic nerve-fibre. There was doubt whether the alkaloid in this instance paralysed the nerve-cells or the nerve terminations of pre-ganglionic fibres around these cells. To settle the point the pre-ganglionic trunk was divided and time for degeneration of its fibres allowed. Nicotine applied locally to the ganglion now called forth its normal stimulation effects, so that the alkaloid must have had a direct *stimulating* effect upon the nerve-cells. Furthermore, nicotine when applied to a sympathetic ganglion caused only a localised erection of skin-hairs in the region supplied by the ganglion. This showed that it could have excited pre-ganglionic nerve-endings, otherwise the movement of hairs should have been much more general. On the other hand, nicotine had no exciting effect on spinal ganglia, nor did it seem to paralyse them, since it did not prevent the passage of nerve-impulses through the bipolar ganglionic cells of the skate. Applied to the spinal cord of this animal the alkaloid caused violent muscular twitchings or tetanus localised in the muscles supplied from the segment. On continued application this effect ceased, but even then muscular movement could be obtained by stimulating a posterior root. Transmission of impulses through the nerve-cells in this case was therefore not destroyed. The foregoing experiments illustrated three different kinds of response on the part of different nerve-cells to one and the same physiological reagent. Other observations also went to show that "the physiological behaviour of the different neurons which make up the nervous system of the body" under similar conditions is different. Professor Langley gave a demonstration of the stimulating action of nicotine on the superior cervical ganglion.

Vascular Dilatation from Excitation of the Peripheral Segment of the Divided Posterior Spinal Nerve Root.

Mr. W. M. BAYLISS (London) stated that he had found, in confirmation of the statements of Stricker, Morat, and others, that the posterior roots of the fifth, sixth, and seventh lumbar and the first sacral nerves contained fibres the excitation of which after separation from the spinal cord caused vascular dilatation in the hind limb. The effect was not abolished by morphine or other anæsthetic. The fibres passed directly into the lumbo-sacral plexus without entering the abdominal sympathetic. They did not degenerate when severed between the cord and the posterior root ganglion, and hence were not efferent from the spinal cord. They degenerated when the ganglion was extirpated and therefore had their trophic centres in the ganglion. They conformed in this respect to ordinary sensory afferent fibres. The name "antidromic" was suggested by Mr. Bayliss for the process by which such nerve fibres conveyed impulses in a direction contrary to that assumed by Majendie's law. No other vaso-dilator fibres passed to the hind limb, hence any reflex excitation of limb vaso-dilators must be "antidromic" in nature. This applied even to vaso-dilatation in the limb caused by excitation of the depressor nerve or central end of the vagus, also to the Lovin reflex produced by excitation of the anterior crural nerve. The corresponding vaso-dilators of the fore limb were situated in the posterior roots of the sixth, seventh, and eighth cervical and first thoracic nerves. No effects of a like nature had up to the present been obtained with the kidney or intestine.

Muscular Tremors in Parkinson's Disease.

Dr. C. NEGRO and Dr. Z. TREVES brought forward a paper on Muscular Tremors in Parkinson's Disease. Dr. Negro had observed twitches or tremors of muscles in patients suffering from Parkinson's disease which he regarded as characteristic of the affection. They were especially marked in the triceps brachialis, when both voluntary and passive movements of the elbow-joint were carried out and particularly when passing from a state of moderate extension to that of flexion. In conjunction with Dr. Treves he had made a more accurate study of their nature. The method of recording them was a plethysmographic one. Von Kries, Schäfer, and others had recorded simple twitches superimposed on the larger contractions of voluntary tetanus. The strength or prominence of these was not uniform, but they showed a frequency as a rule of from 10 to 12 per second. They were not much influenced by fatigue or by the degree of resistance opposed to the contractions. Heavy weights, however, tended to reduce the rate to eight or nine per second. Schäfer had found that similar elementary twitches were present with the contractions caused by excitation of the cerebral cortex, no matter what the rate of stimulation employed. The regulation of their rhythm was therefore a function of the nerve-cell. The tremors of Parkinson's disease corresponded in every way except rate of occurrence with the foregoing observations. Their average rapidity was from 6·4 to 5·6 per second. Hence it must be inferred that in this affection the nerve-cells were unable to emit a series of impulses sufficiently rapid to produce the relatively smooth tetanic voluntary contraction of health. The pathology of the disease lay, therefore, in an altered condition of cerebral nerve cells. This explanation would also account for the great muscular weakness which Dr. Negro and Dr. Treves observed in the affection. It was hoped that their research would constitute a basis for further investigations into the nature of the pathological alteration underlying the disease. Figures were shown recording the tremors in one case. They were small undulations best marked during the phases of extension on the larger waves which represent variations of volume of the forearm.

Looking Back.

FROM

THE LANCET, *SUNDAY, OCTOBER* 19, 1823.

Chemical Discovery.—M. Dobereiner, Professor of Chemistry in the University of Jena, gives an account of a discovery of the greatest importance. By a series of entirely new experiments, he has ascertained that platina, the heaviest of all elementary substances, when reduced into very fine particles, produces, by simple contact with hydrogen gas (the lightest of elementary substances), an electrical or dynamic combination, which, if brought into contact with hydrogen gas, or with atmospheric air, instantly dissolves itself, yielding fire and water. To prove this important fact by a brilliant experiment, M. Dobereiner makes hydrogen pass from a reservoir, by a capillary tube, curved below, upon pure platina in powder, which is confined in a glass tunnel, hermetically sealed at the point, so that the gas mingles with the atmospheric air before it touches the platina. The moment that the current of gas reaches the surface of the platina, the powder of that metal becomes red and burning, and this phenomenon continues as long as the stream of gas is directed upon it. This fine discovery will open a new field for physical and chemical researches.

Caleb Quot'em Eclipsed.—In the village of Harrington, between Evesham and Alcester, a sign-post, exhibited by the side of a barber's pole, thus announces the multifarious occupations, avocations and qualifications, of the industrious and indefatigable inmate.—James Tarrant, joiner, cabinet maker and builder, bricklayer and plasterer, repairs all kinds of machinery, keeps a journeyman *carpenter* to do all sorts of *blacksmith's* work, hangs church bells, pig killer, rings pigs and spays, bellows mender, tooth drawer and hair dresser, well sinker and thatcher, jobbing gardener.—N.B. Gamekeeper to the manor of Norton and Linchwick.

Public Health and Poor Law.

LOCAL GOVERNMENT BOARD.

ANNUAL REPORTS OF MEDICAL OFFICERS OF HEALTH.

Nottingham Urban District.—Enteric fever was very prevalent in Nottingham during 1900 and Dr. P. Boobbyer makes the defects of the conservancy system responsible for it. The prevalence would appear to be confined to certain districts. Special steel pails—as contrasted with wooden pails commonly in use—are employed for the excreta of all patients who are treated at their own homes, but, as Dr. Boobbyer observes, a case only comes under preventive measures when its nature is sufficiently apparent to enable the medical attendant to notify, and by this time all the damage may be done. It is thought that the wooden pails absorb the excreta and give out infected dust. The influence of excrement disposal on, or rather its association with, the prevalence of enteric fever is well shown from the fact that with pail-closets one case occurred in every 92 houses, with midden-privies one in every 20, and with water-closets one in every 407. Dr. Boobbyer has also observed that there is a concentration of cases to the leeward of the refuse heaps, an association which has been observed for the last three years.

Portsmouth Urban District.—Dr. A. Mearns Fraser reports that an effort is being made in Portsmouth to erect a sanatorium for tuberculous patients by means of voluntary subscriptions. He thinks that if this praiseworthy attempt fails in its object the town council, as the sanitary authority, should take up the matter and carry it out well. As he observes, large sums are being expended annually upon the prevention of enteric fever, scarlet fever, and diphtheria, whereas practically nothing is being expended upon the direct control of tuberculosis, and this notwithstanding the fact that the three diseases just mentioned exacted a death-toll in Portsmouth in 1900 only a little in excess of half that caused by the tubercle bacillus. There were no fewer than 1083 cases of enteric fever notified in Portsmouth last year, but the fatality-rate (6·49 per cent.) was fortunately not high. Dr. Fraser is unable to account for the prevalence of the disease, but its main incidence seems to have been on the poorer and less sanitary portions of the town.

Bromsgrove Urban District.—Dr. H. Cameron Kidd has in his estimate of the population of this district come very near to the census figures, the former being 8500 and the latter 8416. Dr. Kidd took the inhabited dwellings in the district as the basis of his calculations and he has every reason to be gratified with the result. Bromsgrove is doing good work in the matter of the control of tuberculosis, and it is encouraging to find so small a district as this emulating the practices of our large towns in this particular. Unfortunately the neighbouring sanitary authorities are not equally alert, and a proposal from Bromsgrove that there should be combination for the purpose of appointing a veterinary inspector did not receive adequate support. Dr. Kidd has, however, been able to induce his district council to adopt the scheme which is in operation at Ludlow under the advice of Dr. C. B. Cranstoun, the medical officer of health. Samples of milk from each dairy in the town are, after due notice, examined for tubercle bacilli, and if such bacilli are found the dairyman is summoned for selling "unsound milk," and ordered to stop the supply until it is proved to be pure. We presume that this means until no tubercle bacilli are to be detected therein. Moreover, the tuberculin test is applied to all cows supplying the dairy. This is very satisfactory, and Dr. Kidd is to be congratulated on having brought the scheme into operation.

St. Helens Urban District.—Dr. F. Drew Harris furnishes in his current annual report an interesting detailed account of the infant milk depôt at St. Helens which has been carried on after the fashion of the original depôt at Fécamp in Normandy. The subject is of considerable interest at the present moment owing to the discussion which has recently taken place in our columns upon the merits or demerits of boiled milk. A small six-roomed house was procured in a convenient position in St. Helens, and the several rooms were appropriated to one or another purpose connected with the scheme. In one room are contained the sterilisers and the bottle-washing machine, and in another the baskets containing the supplies of bottled milk for each customer are stored. In another room the babies are weighed from time to time. The sterilised humanised milk for the infants is prepared by means of the dilution of, and the addition of cream and sugar to, good cow's milk. The milk is then placed in small stoppered bottles of some five ounces capacity, the stoppers are closed and the bottles are placed in the steriliser. By an ingenious device the steam is subjected to slight pressure by means of which its temperature is increased by about 2° C. When the thermometer registers 102° C. the time is noted and the bottles are kept at that temperature for 45 minutes, the whole operation lasting, it appears, from three to three and a half hours. We are assured that by this means the milk does not possess anything approaching a "boiled" taste and that such milk has been kept in the closed bottles for more than a month. When the heating process is ended the fire is raked out and the bottles are allowed to cool. They are then taken out and placed in baskets each of which holds nine bottles—i.e., six feeds for the day and three for the night. The quantity of the milk is adjusted according to the age of the child. Before use each bottle is placed in a little hot water, the stopper is removed, and a teat is fitted to the bottle direct. Every Wednesday the babies are brought to be inspected and weighed and the records are entered in a book. The number of children on the books has steadily increased and in August, 1900, over 140 were being fed. As yet it is difficult, Dr. Harris tells us, to furnish reliable statistics as to the results of the method, but there is evidence pointing to the conclusion that the infantile death-rate has been very markedly reduced thereby; indeed, the saving of life would appear to be about 86 per 1000. It seems, too, that during the hot weather of August many cases were brought to the depôt in the last stages of diarrhœa and obtained the greatest benefit from the humanised milk. Dr. Harris also supplies his readers with the figures for Fécamp which show excellent results from the system. A depôt has also been opened at Havre, and here, too, the results seem very promising. In England, Liverpool, Dukinfield, and Ashton have already started depôts, and in Belfast one is in course of construction.

Bath Urban District.—The Bath Town Council have decided to supply diphtheria antitoxin gratuitously to all those who cannot afford to purchase it, and this proviso will, we expect, be found in practice to have a wide application. Small tubes containing 800 Ehrlich-Behring immunity units are also provided for persons who have been exposed to infection. As Dr. W. H. Symons remarks, the prevention of one case of diphtheria which would be treated at the isolation hospital at the public expense would more than cover the cost of antitoxin for many years. The Bath Town Council have also a supply of plague serum and vaccine ready for emergency. These are praiseworthy provisions, and we are led to reflect as to how many sanitary authorities in this country are equally as ready as Bath in this sense. The voluntary notification of phthisis is in force in Bath and Dr. Symons has apparently been endeavouring to persuade the Great Western Railway Company to take action to prevent infection from spreading through the agency of railway carriages.

Bedford County District.—Dr. George Newman, in his annual volume, which summarises the reports of the district medical officers of health, devotes a small section to "Proceedings of the County Council Relating to Public Health." Such proceedings have not, we gather, unduly taxed the time of the Bedfordshire county councillors. Their total exertions in this sense seem to have taken the form of resolutions respecting the Bedford sewage farm, the distribution of communications with respect to the provision of diphtheria antitoxin by district councils, and as to the prevention of phthisis. Action was also taken in reference to the Biggleswade water-supply, and the medical officer of health was instructed to report upon the isolation accommodation of the county. These actions, however, although few in number, are steps in the right direction.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6556 births and 3498 deaths were registered during the week ending Oct. 12th. The annual rate of mortality in these towns, which had declined from 21·6 to 15·6 per 1000 in the seven preceding

weeks, rose again to 15·9 per 1000 last week. In London the death-rate was 15·0 per 1000, while it averaged 16·5 in the 32 large provincial towns. The lowest death-rates in these towns were 9·3 in Derby, 9·7 in Croydon, 11·6 in Swansea, 12·0 in Cardiff, 12·6 in Plymouth, and 12·7 in Birkenhead; the highest rates were 19·6 in Hull, 20·8 in Manchester, 21·7 in Salford, and 22·5 in Newcastle. The 3498 deaths in these towns last week included 485 which were referred to the principal zymotic diseases, against 732, 634, and 525 in the three preceding weeks; of these, 217 resulted from diarrhœal diseases, 93 from diphtheria, 55 from "fever" (principally enteric), 51 from scarlet fever, 34 from measles, 32 from whooping-cough, and three from small-pox. The lowest death-rates from these diseases were recorded in Derby, Birkenhead, Huddersfield, Halifax, and Bradford; and the highest rates in West Ham, Salford, Sheffield, and Hull. The greatest proportional mortality from scarlet fever occurred in Swansea, Preston, and Halifax; from whooping-cough in Newcastle; from "fever" in West Ham and Portsmouth; and from diarrhœal diseases in West Ham, Wolverhampton, Salford, Hull, Sheffield, and Gateshead. The mortality from measles showed no marked excess in any of the large towns. The 93 deaths from diphtheria in these towns included 54 in London, five in West Ham, five in Leicester, and four in Liverpool. Three fatal cases of small-pox were registered in London, but not one in any of the 32 large provincial towns; the number of small-pox patients under treatment in the Metropolitan Asylums hospitals at the end of the week was 175, against numbers which had increased from 13 to 169 on the eight preceding Saturdays; 37 new cases were admitted during the week, against 37, 44, and 51 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had increased from 2994 to 3159 at the end of the five preceding weeks, had further risen to 3280 on Saturday last; 422 new cases were admitted during the week, against 427, 460, and 426 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 124, 137, and 132 in the three preceding weeks, increased again last week to 186, but were 55 below the corrected average. The causes of 39, or 1·1 per cent., of the deaths in the 33 towns were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Nottingham, Salford, Bradford, Hull, and in 16 other smaller towns; the largest proportions of uncertified deaths were registered in Liverpool, Manchester, Halifax, Sheffield, and Sunderland.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined from 17·8 to 14·5 per 1000 in the five preceding weeks, rose again to 16·1 during the week ending Oct. 12th, and showed an excess of 0·2 per 1000 over the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 6·2 in Perth and 10·4 in Paisley to 17·7 in Dundee and 23·6 in Greenock. The 513 deaths in these towns included 32 which were referred to diarrhœa, seven to scarlet fever, six to measles, six to diphtheria, six to "fever," and five to whooping-cough. In all, 62 deaths resulted from these principal zymotic diseases last week, against 73 and 82 in the two preceding weeks. These 62 deaths were equal to an annual rate of 1·9 per 1000, which was 0·3 below the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of diarrhœa, which had been 42 in each of the two preceding weeks, declined last week to 32, of which 18 occurred in Glasgow, four in Edinburgh, three in Dundee, three in Leith, and two in Aberdeen. The deaths from scarlet fever, which had been two, four, and seven in the three preceding weeks, were again seven last week, and included four in Greenock and two in Glasgow. The fatal cases of measles, which had been five, 12, and 14 in the three preceding weeks, declined again last week to six, of which five were registered in Glasgow. The six deaths from diphtheria corresponded with the number in the preceding week, and included three in Edinburgh and two in Glasgow. The fatal cases of whooping-cough, which had been seven in each of the two preceding weeks, declined last week to five, of which three occurred in Edinburgh. The deaths referred to different forms of "fever," which had been six, seven, and six in the three preceding weeks, were again six last week and included four in Glasgow. The deaths from diseases of the respiratory organs in these towns, which had been 101 and 77 in the two preceding weeks, further declined last week to 75, and showed a decline of 29 from the number in the corresponding period of last year. The causes of 16, or more than 3 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 23·4, 17·8, and 19·9 per 1000 in the three preceding weeks, declined again to 19·7 during the week ending Oct. 12th. During the past four weeks the death-rate has averaged 20·2 per 1000, the rates during the same period being 15·1 in London and 15·6 in Edinburgh. The 142 deaths belonging to Dublin registered during the week under notice were only slightly below the number in the preceding week, and included 21 which were referred to the principal zymotic diseases, against 30, 17, and 20 in the three preceding weeks; of these, 14 resulted from diarrhœa, six from "fever," and one from whooping-cough. These 21 deaths were equal to an annual rate of 2·9 per 1000, the zymotic death-rates during the same period being 1·9 in London and 1·8 in Edinburgh. The fatal cases of diarrhœa, which had been 20, 11, and 9 in the three preceding weeks, rose again last week to 14. The deaths referred to different kinds of "fever," which had been three, three, and eight in the three preceding weeks, declined again to six last week. The 142 deaths in Dublin last week included 36 of children under one year of age and 29 of persons aged upwards of 60 years; the deaths of infants showed a slight increase, while those of elderly persons were considerably below the number in the preceding week. Six inquest cases and five deaths from violence were registered; and 39, or more than one-fourth, of the deaths occurred in public institutions. The causes of 14, or nearly 10 per cent., of the deaths in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

The following appointments are announced:—Staff Surgeon A. J. Pickthorn to the *President* for three months' hospital study. Surgeons: H. W. G. Green to the *Majestic*; E. Sutton to Plymouth Hospital; R. B. Scribner to the *Skuarwater*; and M. L. M. Vaudin to the *Wildfire* for the *Immortalité* and Naval Barracks.

ROYAL ARMY MEDICAL CORPS.

Major Henry James McLaughlin to be Lieutenant-Colonel. Dated July 27th, 1901. Lieutenant Robert Longfield Davies resigns his commission. Dated Oct. 12th, 1901. Civil Surgeon Stafford Adye-Curran to be Lieutenant. Dated July 26th, 1901. Major H. M. Sloggett is posted to the Station Hospital, Western Heights, Dover, for temporary duty. Surgeon-Major J. Mill, A.M.R., has assumed temporary medical charge of troops, Station Hospital, &c., Leith Fort. Lieutenant-Colonel H. Charlesworth is posted to Portsmouth for general duty. Lieutenant C. Thompson has joined at Aldershot and is posted to the Depôt. Captain H. D. Mason is appointed Adjutant of the Manchester Companies of the Volunteer Medical Staff Corps. Major W. A. Morris has joined at Aldershot, and is posted to the Cambridge Hospital for duty.

VOLUNTEER CORPS.

Artillery: 1st Cardigan (Western Division, Royal Garrison Artillery): Abraham Thomas to be Surgeon-Lieutenant. *Rifle:* 1st (Brecknockshire) Volunteer Battalion the South Wales Borderers: John Griffiths to be Surgeon-Lieutenant.

VOLUNTEER MEDICAL STAFF CORPS.

The Glasgow Companies:—Donald James MacKintosh to be Surgeon-Lieutenant.

SOUTH AFRICAN WAR NOTES.

The following have been discharged from hospital to duty:—Major J. H. Brannigan, R.A.M.C., Colonel J. Lane Notter, R.A.M.C., Captain J. Grech, R.A.M.C., and Civil Surgeon Philip William James.

Lieutenant-Colonel J. G. MacNeece, R.A.M.C., Captain G. S. McLoughlin, R.A.M.C., Lieutenant J. W. H. Houghton, R.A.M.C., and Civil Surgeons R. H. Browne

and E. H. Ridley left Port Natal for England on Oct. 12th in the *Orcana*.

Surgeon-Lieutenant-Colonel C. R. Kilkelly, C.M.G., Grenadier Guards, Principal Medical Officer of the Imperial Yeomanry Hospital, in his returns of the Elandsfontein Hospital states that on Sept. 20th there remained in that hospital eight officers and 119 non-commissioned officers and men, the total admissions at that date having been 257 patients.

Mr. Douglas Drew, F.R.C.S., consulting surgeon of the Imperial Yeomanry Hospital at Pretoria, together with several nursing sisters and other time-expired members of the staff, have now returned to this country.

DEATHS IN THE SERVICES.

Captain Frederick John Gaine, R.A.M.C., on Oct. 8th, aged 31 years. He joined the Army in 1897 and served in the Nile Expedition in 1898 and the expedition to Khartoum (Egyptian medal with clasp and British medal).

The appointment of assistant surgeon to the Royal Military College, Sandhurst, will be vacant in December, Lieutenant-Colonel F. Gillespie, A.M.S., having sent in his resignation.

Correspondence.

"Audi alteram partem."

NOTIFICATION OF INFECTIOUS DISEASE.

To the Editors of THE LANCET.

SIRS,—I am reminded by your annotation in THE LANCET of Oct. 12th, p. 987, on "Medical Officers of Health and Diagnosis," of a letter which I wrote to you almost exactly a year ago[1] *apropos* of "The Notification of Plague," the suggestions of which you did not see your way to accept at that time, but may possibly now come to see in a different light. I gave it as the result of experience that the present forms of notification under the Act—i.e., of particular diseases named therein and presumed to be completely recognised *before* notification—tend to undue delay; and that "what is desirable in the public interest is the earliest possible communication to the sanitary authority not of a fully-formed diagnosis but of even a reasonable suspicion, founded on stateable facts, of infection." In the issue you have raised as regards Mr. A. Wynter Blyth's (academic) dictum "that the diagnosis of cases is no part of the duty of a medical officer of health," I am at one with you (only, if possible, more so!). It would be indeed a most perilous position were it to become accepted that a medical officer of health, with his larger experience and wider knowledge of the surroundings, could do nothing but sit still and wait till the identity of a doubtful case of acute disease had become perfectly plain to the possibly inexpert, possibly prejudiced, mind of a junior who may very likely never have seen a like case before, and may without much blame, or at any rate without a clear notion of the mischief he is doing, linger over a diagnosis for a week or more, while the disease is all the while making havoc. In Dr. T Colvin's case alluded to in my former letter 18 days of very acute disease elapsed before the diagnosis of plague was made, and it is even now very doubtful if the diagnosis would have been made at all, but for the happy accident of Dr. Colvin's having been then sent for, he being already familiar with the symptoms. Yet these symptoms were such as might very easily and certainly have suggested an infectious disease of some kind, not only to a medical man but to any ordinarily intelligent observer. I hold that no one in such cases as these—or, indeed, in any cases where the surroundings give rise to suspicion—can be exempted from the legal or moral responsibility of communicating the facts, or even his suspicions about them, to the authorities, and that it is the clear duty of the medical officer of health to encourage all such early information in the public interest (with or without a diagnosis); and further, to clear up the facts as well as he can, to correct the suspicions if necessary, and thus to make, or to assist in making, the diagnosis on which he is to take action. To do this amicably, courteously, and without giving offence requires tact no doubt, and may not always be possible; but if the medical officer of health is not in a position to do this it may be taken as certain that nobody else will, and so doubtful cases of infectious disease must needs go on smouldering indefinitely, till they clear themselves up by reproducing themselves in forms more easily recognised, probably when too late. I hold that the Notification Acts should be amended so as to invite, rather than compel, notification even of suspicious cases of infection by anyone cognisant of the facts, and that the medical officer of health, as the neutral and impartial servant of the public, is the proper person to make the diagnosis in all cases admitting of reasonable doubt. Will you kindly read over again my letter aforesaid in the light of this new aspect of the case and give us once more your views upon it?

I am, Sirs, yours faithfully,

Edinburgh, Oct. 12th, 1901. W. T. GAIRDNER.

P.S.—I had not access to the *Times* of Oct. 8th at the time of writing the above, but after a most careful perusal of the letters of Dr. David Roxburgh and Mr. Wynter Blyth on which your remarks are founded, I have no hesitation at all in giving my unqualified support (*valeat quantum*) to the contention of the former as against the latter. It is not without a sense of surprise (founding on my Scotch experience) that I read in the fourth and fifth paragraphs of Dr. Roxburgh's letter how grudgingly, and, as it were, unwillingly, the St. Marylebone authorities are accustomed to receive the notification of "doubtful" cases; for, as Dr. Roxburgh well says, it is obvious that the "doubtful" cases are the ones which create epidemics; and "medical men will not notify them if the authorities persist in refusing to share the responsibility, as they do in St. Marylebone, and probably elsewhere in London, but certainly not in Glasgow, where I (Dr. R.) was educated." I have only to add that from my own personal knowledge I can affirm that Dr. Roxburgh is well entitled to speak thus.

[1] THE LANCET, Oct. 13th, 1900, p. 1096.

"THE NEW CHIEF MEDICAL OFFICER FOR CAPE COLONY."

To the Editors of THE LANCET.

SIRS,—Some weeks ago I was surprised and pained to read in *Greater Britain* a very venomous and untruthful attack against my friend and late colleague, Dr. A. John Gregory. The statements made in that journal were absolutely devoid of any foundation whatever and such as would not be credited by any respectable medical man in South Africa. Had the matter rested there I should have advised my friend to ignore it entirely. Later, however, it came to my knowledge that Dr. Scholtz of Cape Town had brought forward a resolution at the Medical Council condemning the action of the Government in appointing Dr. Gregory to the post of medical officer of health for the Cape Colony, vacant by my recent resignation, and that Dr. Stevenson had not been ashamed to second it. The proposer and seconder alone supported the proposition and the other members were not sparing in expressing their opinion as to the nature of the resolution.

Up to this time I had not had any communication with Dr. Gregory on the subject, but I then asked his permission to refute the statements which had been published concerning him because he was debarred by his position from doing so himself. Dr. Gregory replied asking me to leave the matter alone. He said that the identity of the author of the statements was an open secret and that he attached no importance to the incident. Of course, I obeyed him. I should have continued to comply with my friend's request to mind my own business and to leave his alone had the matter rested there. But the thing takes a different aspect when it is published in a medical paper of acknowledged standing, such as THE LANCET, and I wish you to publish the facts as I know them and as I verily believe the author of the slanders in *Greater Britain* knew them when he made his communication.

Dr. A. John Gregory was first employed by the Cape Government to give professional advice and assistance in taking the last census. He did that work well and so successfully demonstrated to those then in power the necessity for employing a medical officer of health that it was decided to create the office. I have not the least doubt that Dr. Gregory would have been elected to the new appointment, which he already filled as acting medical officer, only

pressure was brought to bear on the Ministry and I was selected. Had I known the strong claims Dr. Gregory had to the appointment I should certainly not have been a candidate, but I knew nothing about it until I had been appointed and had resigned my position at home. Many men in Dr. Gregory's place, disappointed at losing a post to which they had every reason to suppose they would be elected and having to submit to a consequent reduction of pay from £1000 to £600 per annum, would have set to work to prove to the Government that my election was a mistake. Dr. Gregory, however, is absolutely incapable of acting in such a way. I frankly explained to him that I had burned my boats and could not go back. He accepted the position with the best grace possible and, instead of an enemy ready to point out and rejoice at my many faults, I found a friend ever ready to assist me in all possible ways, whose experience of South Africa was invaluable to me, to whom the Colony with its many peculiarities was entirely new.

The statement that Dr. Gregory "seems to have spent the greater part of his time in the Colony not so much in acquiring a knowledge of sanitary matters and administrative experience in the details of public health as in one of the departments of the Cape Town Colonial Office," if correctly quoted or paraphrased by you, is a deliberate misstatement on the part of your informant. Excepting during the short time he was occupied on the census (and you will appreciate how essential it is that a medical man should be associated with such work and the fund of local information a medical man so occupied must have acquired), Dr. Gregory has been entirely employed in public health work, first as acting medical officer of health, then from August, 1895, to August, 1900, as assistant medical officer of health, and since August, 1900, as medical officer of health for the Colony.

Whether when Dr. Gregory came to the Cape he had ever held a public health appointment I am unable to say; I never asked him. I found an exceptionally able colleague and that was all I cared about. But at any rate he must have given a certain amount of attention to the subject of public health matters, because in 1891 he obtained the Diploma of Public Health of the Conjoint Board. Few men have had a training better suited to a health officer. Dr. Gregory began life as a civil engineer, and the knowledge he then acquired is clearly shown whenever he has to deal with by-laws relating to construction and sewers.

When I came out to South Africa I found that Dr. Gregory had already drafted a Public Health Act which was admirably adapted to the colony. I am afraid that draft Act of his deprived him of the appointment in 1895. Every municipality was up in arms. The author of the Act was by no means a *persona grata*. Pressure was brought to bear and he lost the appointment. There is no doubt that had the Act, as Dr. Gregory originally drafted it, been enacted, instead of the farce now on the Statute Book, Cape Town would not have been in the filthy condition it was when the plague made its appearance. In connexion with the plague the Cape Colony owes a debt of gratitude to Dr. Gregory. It was Dr. Gregory who demonstrated that plague had already reached Lorenço Marques in 1898 and that a case had even penetrated inland as far as Middleburg in the Transvaal. Again, it was Dr. Gregory who detected plague on the steamship *Kilburn*. I was ill in bed at the time, though I got up to superintend the plague camp. It was Dr. Gregory who recognised plague at Kingwilliamstown, and it is due to him it was stamped out. Again, it was Dr. Gregory who showed that rats had been dying from plague at the south arm of the Cape Town docks, although one expert said they were suffering from a new disease and suggested it might be beneficially introduced into India, and it was Dr. Gregory who established the diagnosis of plague in the case first recognised and who traced out some of the preceding cases. Had Dr. Gregory's instructions been implicitly carried out, had the rats which first died been put into the bottles he had provided for such a contingency, and had the animals been sent to the laboratory, there is no doubt whatever that the danger would have been detected months previously, and who can say whether it might not then have been possible to frustrate the epidemic. It is hardly conceivable that such an order could have been so scandalously disregarded and that disobedience entailing so serious a result should have escaped censure, much less punishment. The work connected with the two last-mentioned invasions Dr. Gregory had to superintend entirely, as I was away from Cape Colony; but though I was not present I have had ample opportunity by means of printed documents and letters from various medical friends to know all that occurred.

It is disgusting to find that, after working night and day, at first in face of much distrust and opposition, and eventually demonstrating in the most brilliant manner his capacity to fill the post to which he has been elected, two medical men could be found to bring forward such a proposal as that put before the Cape Medical Council.

I will not apologise for inflicting a long letter on you, as I am defending a valuable public servant who is being badly used and who is so placed that he cannot defend himself. My friend is by no means perfect. He is too straightforward and impatient of humbug to be diplomatic, and his language, while always correct, is frequently unnecessarily blunt, and that peculiarity occasionally makes him enemies. But I maintain that Dr. Gregory has a high conception of his duty, that he acts up to it and is incapable of a mean or unkind action, and that he is eminently qualified for his position. I greatly regret that circumstances have severed our official connexion.

I am, Sirs, your obedient servant,

GEORGE TURNER,
Medical Officer of Health for the Transvaal.

Office No. 12, Government Buildings, Pretoria, Sept. 18th, 1901.

P.S.—I see that one correspondent signs himself "Fair Play." This reminds me that the late Dr. Alfred Swayne Taylor, speaking about anonymous letters, used to say that they were signed "Ajax," "Audax," and all sorts of words ending in "ax," excepting "mendax"; but I suppose a signature is *une quantité négligeable* for the *Greater Britain* people.

*** We are glad to publish Dr. George Turner's vindication of Dr. Gregory. The inconvenience caused to Dr. Gregory (and we extremely regret it) is a cogent illustration of the need that exists for a British medical man to keep his name upon the Medical Register. The presence of Dr. Gregory's name and qualifications upon the Register would have shown us that he possessed the D.P.H. qualification, and our remarks, of course, would not have been made.—ED. L.

THE SANITARY STATE OF TORQUAY.

To the Editors of THE LANCET.

SIRS,—It is with much reluctance that I write to call your attention to the serious contamination of the air of a large portion of Torquay, and it is only after finding that repeated representations on this subject to the town council from myself and others have failed to awaken them to anything like a just appreciation of the state of matters that I appeal to you on public grounds to inquire into things of such vital importance to a large number of people, a considerable portion of whom have come into the place for the benefit of its air.

Torquay, as I may remind you, is spread over an extensive area of hilly ground which, roughly speaking, is of square shape, presenting three sides to the sea and one to the high tableland of Dartmoor. The mildness of its climate both in summer and in winter is dependent upon these sources of air-supply, and in particular the coolness of its summer on the higher ground is largely due to what used to be the pleasant breezes which blow down from the moorland. To safeguard such breezes from contamination would strike most people as a matter of primary importance, not only to the health of the inhabitants, but to the very existence of the town as a health resort. But apparently the governing body of the town thinks otherwise, for whilst with commendable zeal it has freely spent the public money to secure an uncontaminated water-supply from the moors it has with singular perversity done its best to contaminate the moorland breezes by placing under the worst possible local conditions a refuse destructor in that part of the town which looks towards the moors.

I will now try to explain the peculiar features of the site. Of the large area over which the town spreads the valleys for the most part are closely packed with houses, whilst on the hills and slopes the houses mostly stand in gardens. In this way a very long sinuous limestone valley forms a kind of backbone to the town, its lower part being now called Fleet-street and Union-street, whilst its upper part is called the

Upton Valley. It is along the Upton Valley that the town has grown outwards towards the moors, and its further part is closely packed with houses occupied by some of the poorer classes of the community. The valley finally ends in a narrow gorge, which is almost closed by two lofty limestone cliffs. Now what was the site chosen for the chimney of the destructor? The top of a hill, every one would naturally answer, so that the fumes might be wafted away in the upper currents of air far above the town. No; it is placed down in the valley. And where in the valley? At the base of the cliffs and in the angle between their faces. And where is the chimney-top? The chimney, tall and ugly as it is, just reaches to the top of these cliffs, so that it actually leaves off just where it ought to begin. What follows from the violation of every principle that should have guided the *homo sapiens* in such a work might have been easily anticipated. When the wind blows strongly, and more especially when it is northerly or westerly, currents of air pour over the cliffs in cataracts, sweeping down the smoke and fumes issuing from the chimney and rolling them about till they impinge upon the higher ground encircling the valley. And whatever the direction of the wind may be some part of the surrounding district must suffer. Thus my own house, being situated to the south of the chimney and on a level with its top, with a northerly wind the smoke-fumes are blown straight to my quarter, filling my garden and my rooms with a nauseous and acrid belch. Again, with an easterly wind the Teignmouth-road suffers in like manner, and with a westerly wind various parts of St. Marychurch and the St. Marychurch-road, and so on. The nuisance causes serious injury to health, such as headache, nausea, sore gums, with a peculiarly nasty and persistent taste in the mouth, sore-throat, and sometimes vomiting and diarrhœa, and to people with delicate throats and chests it is a serious menace to life. Some invalid ladies living near me are cruelly persecuted by the nuisance, frequently having to rise in the night to shut down, not only the windows, but the chimney registers. I could name many similar instances. I myself have often been awakened in the night by a sudden invasion of my bedroom by the belch. Not only is all enjoyment of life thus effectually destroyed for the time, but a condition of nervous depression is induced by the foreboding that at any hour of the day or night one's house may be rendered almost untenable. Before the nuisance came I myself never experienced even a day's indisposition here, and in particular I used to enjoy in the summer the cool moorland breezes; but now I frequently suffer from headache and sore-throat, and I await these breezes with dread. There is a penalty for adulterating certain kinds of foods; is there none for contaminating that most necessary of all foods—air!

We have now passed through the third summer of the nuisance and its removal is not yet in sight. Forewarnings of the consequences of placing the chimney where it is were unheeded by the authorities. On Jan. 20th, 1897, the morning of the inquiry by the inspector of the Local Government Board (Colonel Durnford), a deputation consisting of some of the influential inhabitants of the district attended to protest against the proposed site, and a petition signed by owners and ratepayers, together with an important letter from Colonel Acton, was presented in support of their protest. Their objections were met by a well-organised band of town officials, the borough engineer producing a drawing which represented the chimney projecting apparently far above the cliffs. The chimney actually erected, as I have mentioned already, does not rise above the cliffs. It is, in fact, 50 feet shorter than the one sanctioned by the Local Government Board. Complaints respecting the nuisance have been met by the town authorities all along in a captious spirit, and every effort has been made to throw discredit upon them. It was not, indeed, until the spring of last year that they were admitted to have any foundation whatever. In the course of the ensuing summer the nuisance became so intolerable that a petition was numerously signed in the districts asking for its removal. St. Marychurch then had its own district council, which warmly took up the complaints of its own ratepayers, and so it sent a deputation to the Torquay Town Council for their presentation. I myself attended at the same time as one of the deputation of the Torquay petitioners. The mayor (Mr. Beavis), who was present when the deputation was received, promised complete redress. He said that everything should be tried to remove the nuisance and that if other measures failed the chimney should be removed. A new fume-cremator was promised to begin with, and this, after the lapse af several weeks, was put in. After giving a long and patient trial to this remedy, the effect of which was to tone down the stink only to a slight extent, the nuisance at length became so intolerable that another numerously signed petition from Torquay and St. Marychurch, which had now become part of the borough, was sent in to the town council pointing out that whilst the appliances of the destructor might be still incomplete the main cause of the nuisance was the admittedly wrong position of the chimney. The petition earnestly requested the council to take into serious consideration measures for removing the chimney to a suitable site. On May 3rd the petition was placed in the hands of the present mayor who duly presented it to the council, by whom it was referred to the Destructor Committee. The latter, after a good deal of embarrassment, at length fetched down the patentee of the destructor in the hope that he might help them out of their fix. The only good resulting from the conference was some improvement in the stoking, for which there was abundant room, but the root of the evil remained untouched. Meanwhile the nuisance has continued and at times has been well-nigh intolerable. For instance, last Monday and Tuesday, in the squally weather which then prevailed, the condition of the atmosphere was simply disgraceful and a great many people were made ill.

The town council evidently will do nothing until strong pressure is brought to bear upon it from the outside public. Many of them apparently think that stink is a normal accompaniment of the atmosphere—at least, this is the only conclusion I can form from things which they have said. A written communication, too, which I have carefully preserved, from a high official of the town conveys the same impression. I apparently have spoken to deaf ears, but I venture to think that a few plain words from you, Sirs, may have some effect. I am, Sirs, yours faithfully,

HENRY HUMPHREYS, M.A., M.D. Camb., M.R.C.P. Lond.
St. Marychurch-road, Torquay, Oct. 12th, 1901.

THE ISSUE REGARDING THE ETIOLOGY OF PERNICIOUS ANÆMIA DEFINED "A DEFINITE INFECTIVE DISEASE."

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me to point out, to prevent any possible misunderstanding, that the interpretation put upon my recent work on the above subject by a reviewer in THE LANCET of Sept. 28th, p. 851, is in very truth, as he himself courteously admits it may be, quite "a false one"; and that all the difficulties he with great care points out arise out of his interpretation and have really no existence. The mistake has arisen from divorcing a single sentence from its context, both immediate and remote, notwithstanding that in my Preface I especially request that this must not be done.

If typhoid fever were thought to be a form of diarrhœa—a "pernicious diarrhœa"—producible by many causes, such as indigestion, bad food, weakness of constitution, wasting diseases, &c., and anyone asserted without further premiss that "the chief source or cause of the disease was drinking sewage-polluted water or sometimes, possibly, mere exposure to drain smells" (without the intervention of bad water), this would be nonsense, since it could be at once pointed out that many people drink sewage-polluted water or are constantly exposed to drain smells without contracting this particular form of diarrhœa. But as soon as it is made clear that this so-called "pernicious diarrhœa" cannot be produced by such general causes, but is in reality a special infective disease caused by a special infection, the first statement becomes quite clear. It is understood at once that sewage pollution or bad smells *per se* are not the primary cause, but merely the more immediate sources or causes which determine the onset of the disease in the particular case. And if one had not discovered or isolated the particular organism that constituted the special infection—as for many years was the case after it was shown by Sir William Jenner to be a special infective disease distinct from typhus fever—the most important point in its etiology would undoubtedly be the fact of its sewage origin. Without the slightest ambiguity of meaning, therefore, one can say that "*typhoid fever is a special infective disease of filth nature and of sewage origin.*"

Now, Sirs, it is a definite conclusion of this kind that I

have arrived at regarding "pernicious anæmia." It is not merely a form of anæmia, but a *special infective disease*. The sentence which has misled so grievously (and has been so surprisingly interpreted since it is made clear by the very statements quoted that that interpretation is quite wrong) is of the same character and in practically the same terms as the above statement with regard to typhoid fever. If applied to pernicious anæmia as a disease, which I considered could be produced by all sorts of general causes and morbid conditions (as is the generally accepted teaching), it would be absurd to say of it that its chief source or cause was some local sepsis in the mouth; for notoriously such sepsis is as common as pernicious anæmia is rare. *But it is not to any such general disease or morbid state that the statement is applied.* On the contrary, it is applied to a disease which, as the outcome of work detailed in the preceding 250 cases, I find to be "not merely a special anæmia but in reality a special and well-characterised infective disease—one that cannot be produced by any of the ordinary factors of anæmia, *however severe they may be*" (Preface), included among such factors by special mention being "dental caries, stomatitis, glossitis, and all other gastro-intestinal conditions" (p. 204); a disease of which I have to state with utmost emphasis as the outcome of facts detailed that "in my own mind no fact stands out more clearly in connexion with the etiology of the disease than that none of the above conditions—so-called 'causes'—can of themselves produce the disease of pernicious anæmia with all its characteristic hæmolytic changes" (p. 225).

When immediately following such statements (surely clear and emphatic enough) I go on (p. 227) to define the disease as "a special infective disease caused by a special infection," and proceed in the very next sentence to speak about this infection and the part that oral sepsis plays in connexion with it, it is quite clear that such words as "causes," "source of infection" are now being used in the strictly subordinate sense in which they are daily used in connexion with the onset of an infective disease—viz., not as the causes which determine the existence of the infection in the first instance, but those which determine its taking root in the body. [The question of the primary nature and source of infection, as a matter of fact, I leave quite open (p. 225).] It is a rôle of this kind—*of the utmost importance, but always subordinate to the special infection underlying the disease*—that oral sepsis and its local effects play in the etiology of pernicious anæmia. "The disease is a definite and well-characterised special infective disease—one in which oral and gastric sepsis plays an important antecedent and concurrent part" (Preface). What this part is I describe at great length—viz., creating the subacute and chronic catarrhal glossitis and gastritis, or in some cases enteritis, which enable the infection to take root (its "antecedent rôle"); in all probability also operating in another way—viz., by determining the degree of virulence of the special infection—an action exceedingly probable—or by acting along with it as a "mixed infection" ("concurrent" rôle).

Such is the clear and definite issue I have raised regarding the etiology of this disease. There is no dubiety about its character. It is brought out in every section of my recent work from the opening inquiry which heads the first chapter, "What is Pernicious Anæmia?" up to the final conclusions which I have just given. And to avoid all possible oversight I bring out these conclusions once more in the Preface. The issue is this: (1) "none of the ordinary factors which produce anæmia, however severe they may be, can produce this disease; (2) the disease is really a specially infective disease, characterised by intense hæmolysis (with anæmia) and other, hardly less definite and constant, toxic clinical features; (3) in the development of the disease—i.e., in enabling it to get rooted in the mucosa of the tongue, stomach, or intestine where it has its site—probably also in intensifying its virulence, long standing oral sepsis and its subsequent effects in the stomach and intestine are the most important etiological factors." And so of this "anæmia" (as of the "diarrhœa" of typhoid fever) I can say without the slightest ambiguity of meaning—as I do say—that "it cannot be produced by the ordinary factors causing anæmia (diarrhœa), however severe they may be; on the contrary, it really is a special infective disease.....of septic nature (of filth nature).....and of septic origin (of sewage nature)."

This being the issue clearly and emphatically set forth, it can be no less clearly met and dealt with—viz., by showing on extended grounds covering the morbid anatomy, infective nature, clinical features, and etiology of the disease: 1. That the disease with its distinctive hæmolytic changes *can be* produced by all ordinary causes of anæmia. 2. That it is *not* an infective disease limited to the mucosa of tongue, stomach, or intestine; in particular, that recurrent glossitis of a special, recurring, and peculiarly persistent character—the most obvious manifestation of its lesions—does not occur. 3. That sepsis—oral, gastric, or intestinal, singly or combined—plays no part in the development of the disease, as evidenced by the absence of their clinical or pathological manifestations—namely: (*a*) no history of oral sepsis or of stomatitis or soreness of mouth previously to or at the time of onset of the disease; (*b*) no history of periodic gastric trouble (nausea, sickness, or vomiting); (*c*) no history of periodical intestinal troubles (looseness or diarrhœa)

But if this issue is to be dealt with *it must not be obscured by ignoring the first two vital portions of it*, and by representing that the third alone is the chief, still less that it is the whole, issue raised by my work. Nor need it be so put that I have been led by interest in the subject of oral sepsis and its gastric effects to attach an undue importance to their presence and possible rôle in pernicious anæmia. For, as a matter of fact, as I have pointed out elsewhere, it has been the study of their rôle in pernicious anæmia that first directed my attention to, and led me to investigate, their possible importance in other and much simpler conditions. The matter is not one that is capable of being decided by any controversy, but only by observations on the disease itself in the light of the new class of facts now raised for consideration; and it is solely with a view to promote such further observations that I have now been induced to write.

I am, Sirs, yours faithfully,

Harley-street, W., Oct. 7th, 1901. WILLIAM HUNTER.

THE REORGANISATION OF THE ARMY MEDICAL SERVICES.

To the Editors of THE LANCET.

SIRS,—With your permission I propose to make a few remarks on this important national topic, apologising for the necessarily lengthened character of this communication. The report does not profess to take in hand all the recommendations made by the South African Commission, but, leaving the organisation of the Royal Army Medical Corps intact, it furnishes a scheme providing a body for carrying out these recommendations, while mainly contenting itself with the development of the medical *personnel* to the requirements of scientific progress and medico-military advance and rectifying recognised defects. How far the proposals are of a satisfactory character and how far the scheme is open to fair criticism are points on which probably much difference of opinion will exist. Personally I approach the subject from a present outside standpoint with an experience of some 35 years of the inner working of this departmental system within the period embraced. Though the report is so far but a series of proposals it doubtless will constitute the foundation on which a Royal Warrant will be built and hence indicates the intentions of the War Office in the future of the corps in respect to the points touched upon. I arrange my remarks as follows.

1. *The constitution of the Advisory Board.*—It is to consist of four army medical officers, four civil medical men, and a representative of the War Office and of the India Office respectively. In it we recognise the old Consultative Board of the Crimean Committee reproduced, qualified by the addition of the civil medical element and of the officials referred to. Equally balanced as the components are it contains no deciding voice. The professional element predominates, but in the event of disagreement between the military and civil sections the deciding factor rests with the officials. It may be fairly questioned whether the proposed new board is an advance over the old board comprised of four selected army medical men of the highest grade with full experience of army needs, especially as at present constituted. The military section can be overruled by the six members with no close personal experience of army work and its requirements. And this point is of more importance as by Paragraph 7 this board has to submit a scheme dealing with war requisites—ambulances, transport, equipment of medical units, provision of *personnel*, &c.—and by Paragraph 14 the retention and promotion of officers in the service will be referred to it, including the appointment of a Director-General. It is true that by Paragraph 12—inspection of hospitals by a sub-committee—

some of its members may obtain a little personal experience of some of the army medical men, yet outside this it is difficult to perceive how the requisite knowledge for guidance in such matters is to be obtained sufficient to place them in a position equivalent to the four army medical men whose personal experience must be far in advance of them and whom conjointly with the War Office and the Indian officials they may override. And in respect to the inspection of military hospitals by a sub-committee, is such inspection to supersede that made by the principal medical officer of an army corps or district? and is it to be limited to the United Kingdom, excluding the numerous hospitals scattered abroad and possibly far more requiring the specified supervision?

2. *The Director-General.*—In the scheme the old process is continued which practically leaves the appointment in the hands of the Commander-in-Chief and so gives him a dominant control over the higher officers at least. It is true that the Commander-in-Chief is by Paragraph 17 to act "with the advice of the Advisory Board," yet it may be confidently anticipated that the selected man will require to be at least a *persona grata* to the Commander-in-Chief. The defect appears to be that there is no guarantee that the ablest and best man for the post will fill it, while there is full scope for the predilections and personal views of this military official which we know from the past may be anything but conducive to a well-organised and efficient medical corps. No less defective is the questionable responsibility of the Director-General. While apparently having no seat at the Army Board and subordinate to the combatant section of the War Office he is, by Paragraphs 18 and 19, held responsible for the administration of the army medical services, for promotion and for their general organisation, yet neither in respect to the provision of requisites for army needs nor to organisation nor to promotion has he a deciding voice, but the first of these rests by Paragraphs 6 and 7 with the Advisory Board (of which he is one among eight units) and the Secretary of State and the last is divided among the board generally subject to the control of the Commander-in-Chief. The arrangement as proposed permits of the assessment of future responsibility in these matters against the Director-General or the impersonal board, or the Secretary of State or the Commander-in-Chief as one or other paragraph may be regarded as binding; in other words, it provides a scapegoat or permits such a division of responsibility as to defy any personal application of it. If anything the responsibility of the future Director-General is lessened by the Advisory Board, while his subjection to the combatant branch as personified by the Commander-in-Chief remains in full force.

3. *The supply of medical officers.*—The increased rates of pay per annum, the charge and specialist pay, are decidedly conducive to numerical increase of applicants as compared with recent years, while on the other hand the requisite conditions are far more stringent, and the question is, which will be the determinate factor in the future supply? The candidate must produce such evidence as is required of character, conduct, professional ability, and fitness for a commission, he must be physically fit and pass a clinical and practical examination in medicine and surgery, following which he has to undergo instruction and examination at Netley and a similar process at Aldershot in prescribed subjects, the qualifying test being a percentage of 50 of the marks set and failure after a second attempt leading to rejection; if successful his position on the list is determined by the combined results of these three examinations. Considering that the candidate is already a qualified medical man, entitled to practise, the test for a commission is a stringent one and one, probably, which none but those above the average would care to face, especially when taken in conjunction with the subsequent tests.

4. *Conditions governing the future army career.*—After having served as a lieutenant for three years in a corps or army unit the officer may retire, or if well reported on may join the reserve for seven years at £25 per annum or continue on in the service. Should he select the latter he commences a series of examinations, three in number, guarding the approach to each step in rank, the qualifying test being either 40 or 50 per cent. of the value of the questions set, each examination being preceded by a separate course of study, taken at a specified time as a rule, the subjects becoming less professional and more of a medico-military and administrative character as the examinations progress, the results if of a high order leading to a graduated acceleration of promotion, if below the qualifying test permitting of a second chance, failure in which entails retirement from the service. No pecuniary gratuity on retirement is allowed until after nine years of service when it amounts to £1000, and after 18 years when it is increased to £2500; hence, failure to meet the earlier examination requirements will necessitate the professional man commencing civil life unaided by any pecuniary reward for any service under nine years. Up to the rank of major seniority tempered by possible accelerated service governs the progress of the individual; for a lieutenant-colonelcy selection comes into force from a list of those qualified for administrative work as tested by the last required examination—the sixth from the application for admission into the corps—50 per cent. of the marks set being required; and for the higher grades selection prevails. The questions arise: Will not these numerous examinations, necessitating a high standard, operate as a deterrent to the young qualified man already wearied by the numerous tests required under the Conjoint scheme? And, moreover, provided the right men be obtained in the first instance, are they necessary reasonably to safeguard the service? Would not one examination after the entrance test, with gradations as proposed in accordance with standard passed, and selection to lieutenant-colonelcy onwards, suffice? That the principle is good may be granted, but the execution of it leaves much to be desired. The formation of a "bookworm" seems the likely result and not the good all-round officer which the service needs. Continuous study will be essential, and the thought occurs, Where is the time for obtaining all this theoretical knowledge and for the practical army work to be found? Where do reasonable recreation, social duties, and other scientific pursuits come in? And from the administrative point of view a difficulty in meeting the possible requirements will soon make itself felt. To permit of the application of the scheme a very decided increase of *personnel* is essential, not only for this provision but also for the lieutenants attached to corps or units, and will this increase be forthcoming? How will the foreign service be arranged, the lieutenant stage being apparently passed at home, so as to permit of the study leave, attendance at practice of civil hospitals and the acquirement of knowledge of the professional advances made? How can these be carried out under war or other pressure? How can the chances of each individual, scattered as the service is over such a wide area and with such variable opportunities of obtaining the required knowledge, be made equal—in other words, fair play given—in view of this graded acceleration of promotion operating at each step in rank? Whether the entry of men will equal the demands remains to be seen; but, the required numbers obtained, the difficulties of placing the scheme on a sound fair working basis cannot but be great, and probably will indicate it as unworkable should unfavourable conditions prevail. The system proposed seems overburdened by unnecessary restrictions.

5. *Promotion by selection to the administrative grades.*—This neglected and cast-off principle of the Herbert warrant is again revived, yet the grounds on which it is to be based are curiously omitted in the scheme. It is to operate for the rank of lieutenant-colonel and upwards, through the Advisory Board (including the Director-General) and rest in the Commander-in-Chief. What may be the respective powers of those having a voice in determining the result, what may be the strict responsibility of the Director-General in the matter, what may be the influence of the Commander-in-Chief, so far as opposing or supporting the principle or controlling its individual application; whether in this professional corps professional and scientific attainments shall receive full consideration or the old baneful course be followed, or what qualities shall be taken into consideration—these are all doubtful details. That this is not a mere academic question, but one of great practical value, will be apparent in view of the power resting in the Commander-in-Chief touching promotion, of the impotence of former professional departmental heads to safeguard the special provision of the Royal Warrant following the Crimean Commission touching selection for merit, and of the course taken in the past in advancing individuals over the heads of others. The grounds on which selection is to be based require to be stated and some guarantee given that the conditions shall be fairly and honestly observed, and this is a point well worth the careful consideration of any highly qualified and talented professional man before embarking on an army career. The past will not bear inquiry.

6. *Concluding remarks.*—That the scheme, as a whole, is based on right principles and is an honest attempt to remedy the defects will probably be granted, though whether the details are likely to effect the desired objects may be fairly doubted. The provision of brevet rank, charge pay for certain large hospitals (a tardy acknowledgment of the justice of the appeal made by some executive officers in India in the past without result), devolution of powers from the head office to the principal medical officers of corps and districts, provision of means of instruction in field medical duties at the headquarters of each army corps, and the relief of clerical work, all are of unquestionable value, though the separation of the medical officers of the Household Brigade from the corps can hardly be placed in the same category. Apparently the Netley School is doomed, though a substitute is provided in the proposed military hospital and Medical Staff College (Millbank?). The scheme falls short of that of Lord Herbert in the lack of provision for sanitary means and supervision—a detail fully justifying the exception taken by Professor A. Ogston—and this is a strange omission in view of the fact that the primary *raison d'être* of the corps is not curative but preventive medicine, and of the repetition in this war of former experiences of the enormous preponderance of disease over war injuries in the curtailment of efficiency of armies in the field. How far the scheme will bring about a corps capable of efficiently performing the duties entrusted to it to the benefit of the army and State will depend on the spirit in which it is met by the service at large—especially the combatant branch—and the official heads, and on the degree to which free play is given for action by the army and medical regulations. As was well put by Major-General Sir Ian Hamilton: "Recollecting that it was but a framework its scientific possibilities in sympathetic hands would be understood. There would come the rub—the hands must be sympathetic and kindly, and not only the hands of the War Office but those of the Government of India." Just so; the power residing in the Secretary of State for War and in the Commander-in-Chief—including under him the army sections under his influence and sway—to make or mar the scheme is beyond doubt, a fact fully attested by the action taken in the past ending in the destruction of the Magna Charta of the Medical Department, a Royal Warrant notwithstanding. And no one who has "gone through the mill" will doubt the power of army regulations and orders to bring to nought the best devised schemes which clash with the views of the military caste. The unfortunate feature in all such schemes, including warrants, is that there is no guarantee for their observance. So far as this one is concerned the aspirant for army medical service may fairly rely on his pay and on the recognition of his professional attainments to the rank of major, but in respect to provision of the means enabling him to meet the requirements of the numerous examinations, in respect to promotion to the higher grades through professional merit and scientific attainments, in respect to having full scope for the abilities he possesses and the desire to work, in respect to obtaining opportunities for scientific pursuits, he is in the hands of others, and past experience, unfortunately, is a warning against undue sanguineness on such and other points.

I am, Sirs, yours faithfully,

FRANCIS H. WELCH, F.R.C.S. Eng.,
Surgeon-Colonel (retired), A.M.S.

Lee, Oct. 14th, 1901.

MILD CASES OF SMALL-POX.

To the Editors of THE LANCET.

SIRS,—I am very glad to see by your leading article of Sept. 21st that Mr. Wynter Blyth has suggested that the Metropolitan Asylums Board should publish illustrations of actual cases of mild small-pox for the benefit of those practitioners who are unacquainted with the disease at sight. Would it not be a boon to students, teachers, and practitioners generally if the medical officers of the Board could be prevailed upon to issue a small series of similar illustrations? My experience of the early erythematous and hæmorrhagic eruptions of small-pox is that they are seldom recognised at their onset by physicians who have not had special experience of a small-pox epidemic. In common with many others I learnt to diagnose chicken-pox by studying the cases erroneously sent into a small-pox hospital during a small-pox epidemic. The hæmorrhagic varieties of the ordinary infectious diseases are always worth portraying, to say nothing of the typical rashes of typhus fever, enteric fever, scarlet fever, measles, and rubella. Perhaps there might be added some of the rarer forms of diphtheria, with membrane on the conjunctiva or on open wounds, or even an illustration of the rashes which sometimes follow injections of antitoxic serum. I venture to extend the scope of the original suggestion because I do not know of any similar atlas already existing for infectious diseases. If, however, there is one, perhaps you or one of your readers will be so kind as to inform me.

I am, Sirs, yours faithfully,

F. M. SANDWITH, M.D. Durh.

Cairo, Oct. 1st, 1901.

"THE AFTER-COMING HEAD; PREVENTION OF ASPHYXIA."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Sept. 21st, p. 815, Dr. Edwin Smith suggests the introduction of a catheter into the child's mouth in cases of breech presentation in which the head is delayed in delivery. In Barnes's "Obstetric Operations," second edition, 1871, page 198, it is stated: "You may sometimes get the tip of a finger in the child's mouth, and drawing this down, whilst you lift up and draw back the perineum, you may enable air to enter the chest. In this way I have kept a child breathing for 10 minutes before the head was born. Another plan is to pass a catheter or other tube into the mouth so as to give by means of a kind of artificial trachea communication with the external air, or better still Richardson's bellows." It will be seen, therefore, that this line of treatment was advocated 30 years ago. "There is nothing new under the sun," not even in midwifery.

I am, Sirs, yours faithfully,

C. H. L. JOHNSTON, M.D., L.R.C.S., and L.M. Edin.

St. John, New Brunswick, Oct. 3rd, 1901.

THE FORTHCOMING ISSUE OF THE MEDICAL DIRECTORY.

To the Editors of THE LANCET.

SIRS,—If you can spare a little space in the next issue of THE LANCET we shall feel much obliged by your warning your readers of the approaching publication of the Medical Directory for 1902. It is well known that the volume cannot be accurate unless all the latest information is supplied to us by the profession and various secretaries of medical institutions, and as we are now about to make up for the press any additions or alterations should be posted to us at once.

We are, Sirs, your obedient servants,

J. & A. CHURCHILL.

7, Great Marlborough-street, London, W., Oct. 12th, 1901.

"A MEDICO-LEGAL SOCIETY."

To the Editors of THE LANCET.

SIRS,—I do not, of course, know who "M.D., D.P.H." may be, but I am quite with him and willing to become an original member of a medico-legal society, and to help to promote such a society.

I am, Sirs, yours faithfully,

FRED. J. SMITH,
Lecturer on Medical Jurisprudence, London Hospital.

Oct. 13th, 1901.

"WORKHOUSE NURSING."

To the Editors of THE LANCET.

SIRS,—By some process of mental gymnastics Mr. F. R. Humphreys has persuaded himself that in my last letter I represented Miss Twining as stating that her plan had been annexed by Mr. Humphreys.

The opinion there expressed is my own and not that of Miss Twining and it has been deliberately formed after reading her writings, kindly sent by her and published before Mr. Humphreys thought fit to announce the plan as his own, and my object in drawing attention to this will have been attained now that Miss Twining's rights as the author of the scheme have been established. Is not Mr. Humphreys fluttering on rather a lofty perch when he charges me with "flagrant conduct" because I do not humbly withdraw my formed opinions at his august bidding? It is an unfortunate

characteristic of our public life that any ambitious amateur, if endowed with sufficient pertinacity, can always obtain a hearing and if backed with sufficient noise can sometimes overcome expert professional opinion. I hope MR. HUMPHREYS will give me an opportunity of joining issue with him in the pages of the "great monthly magazine."

I am, Sirs, yours faithfully,

F. S. TOOGOOD, M.D. Lond.

Lewisham Infirmary, High-street, Lewisham, Oct. 14th, 1901.

CLUB PRACTICE.

To the Editors of THE LANCET.

SIRS,—I am instructed by the Stockton, Thornaby, and District Medical Association to lay before you the following facts. Some months ago this association unanimously passed a resolution that no member would accept or hold any appointment to a friendly, trade, or yearly society at less than an annual fee of 4*s.* for adults and 3*s.* for juveniles. The societies in question agreed to this, but now an amalgamation has taken place between certain of them and they are attempting to obtain the services of an outside medical man at a lower rate of remuneration. The members of the Association have pledged themselves to hold no professional relations with any medical man who may accept the post. By making these facts known in THE LANCET you will oblige, and at the same time may prevent any medical man applying for a post the remuneration for which is inadequate and its disadvantages necessarily very great. Thanking you in anticipation,

I am, Sirs, yours faithfully,

FRED. G. SMITH,
Joint Secretary.

Oct. 13th, 1901.

"TUBERCULOSIS AND HEREDITY."

To the Editors of THE LANCET.

SIRS,—I should like emphatically to endorse Sir W. Gowers's remarks in THE LANCET of Oct. 12th (p. 1007) as to the importance of heredity and predisposition in the etiology of tuberculous disease. At the present time the tendency is to exalt unduly the importance of extrinsic factors in the causation of disease and to ignore the intrinsic factors. Yet for preventive and therapeutic purposes the latter are often the more important, and that this is the case with tuberculosis I propose to show. The discovery of the tubercle bacillus was a great triumph for the bacteriologist, but it has not done much for the more effectual prevention and treatment of the disease. Long before its discovery remarkable diminution had been effected in the mortality from tuberculous disease in this country by the introduction of methods that tended to strengthen the predisposition of the organism against the disease, and to the continued operation of such factors the present diminishing mortality from the disease is undoubtedly due. Instead of being encouraged to persevere along these and kindred lines the profession has been misled by bacteriologists to entertain the delusion, that the disease may be prevented by exterminating the special microbes or by preventing their access to the body—both of which expectations are futile. Because a few living tubercle microbes were found in a roll of beef that had been cooked in the ordinary way a learned commission somewhat hastily concluded that the disease was therefore spread by eating such meat, &c. If this were so the tubercle mortality would have doubled during the last half-century, for the meat consumption per head has increased in that proportion; but the fact is that the tubercle mortality has diminished by more than one-half. Plenty of good meat—which generally contains some tubercle bacilli—is one of the chief safeguards of crowded urban populations against tuberculosis. Bacteriologists seem to forget that under modern conditions of life it is impossible for anyone to escape from the infection of tubercle; and all schemes for the prevention of the disease based on the contrary supposition are mere fads.

The more thoroughly post-mortem examinations are made the higher is the percentage of tuberculous lesions discovered; until when such examinations are made with the utmost scientific precision almost every body examined is found to present undoubted signs of tubercle. Thus, Naegeli reports that of 500 post-mortem examinations at the Zürich Pathological Institute undoubted signs of tubercle were found in no less than 97 per cent. of all the bodies examined. Now if this be so—and personally I believe it to be true—how can we account for 12 members out of a family of 13 dying from tubercle—as in a case of which I know—otherwise than by predisposition and heredity?

I am, Sirs, yours faithfully,

Clifton, Bristol, Oct. 14th, 1901. W. ROGER WILLIAMS.

WORKERS' RESTAURANTS.

To the Editors of THE LANCET.

SIRS,—In the course of my daily duties which bring me into close contact with the working girl of the West-end the pressing need of special restaurants for women and girls is constantly presenting itself. It is obvious that for the rapidly growing girl, whose strength is further taxed by sedentary occupations in close rooms for long consecutive hours, abundance of nourishing food is essential. In the workrooms of the dressmakers and milliners of the West-end there are thousands of young girls employed, from the child apprentice earning a weekly half-crown for "pocket-money" to the finished assistant who receives on an average from 15*s.* to 18*s.* per week. These are absent from their distant homes for periods of 12 hours and longer, during which time a nourishing meal is unobtainable.

The prices of the West-end restaurants are, needless to remark, beyond the reach of these workers. At the mid-day break the only alternative is a lunch at the tea-shop, where the few pence are spent in worse than useless fare, or the consumption in the workroom of the unappetising dry sandwich. Is it to be wondered at that so many girls break down at the onset—that many more struggle wearily on, battling with that arch enemy to young womanhood, anæmia, which is the forerunner of even worse ills? The point I wish to emphasise is that at present these girls are unable to procure the food of which they are so much in need. I am convinced that it would not be difficult to remedy this state of things by starting special restaurants where good hot meals at cheap rates could be obtained; indeed, I am of opinion that it would be possible to raise capital for such a purpose, and if a sufficient number of these restaurants were started and well managed financial success might be counted upon and a small dividend paid to investors.

Employers would doubtless liberally encourage such an undertaking, and in so doing would be acting in their own interests, while I am sure that many of the ladies who wear the beautiful gowns and millinery which these clever workers produce would gladly become shareholders and so help to confer a boon on those who are labouring for them. I should be glad if employers of labour or others who may be interested in this question would communicate with me, with a view to putting the idea into practical form.

I am, Sirs, yours faithfully,

L. MARGUERITE O'KELL,
Sanitary Inspector.

Town Hall, St. Marylebone, W., Oct. 9th, 1901.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Recrudescence of Plague in India.—Leprosy in Burdwan.—Original Observations on the Habits of Certain Mosquitoes.

THE deaths from plague throughout India have been mounting up week by week, and the last return, for the week ending Sept. 14th, shows that 6386 deaths occurred as compared with 4822 in the previous week. The Bombay Presidency is severely affected, 5668 deaths being reported last week, against 4132 in the preceding week, and against only 593 for the corresponding week last year. Of this number 293 deaths occurred in Bombay city, 1235 in Belgaum, 1455 in Kolhapore, 1509 in Dharwar, 107 in Thana, 86 in Surat, 78 in Cutch, and 586 in Satara. In other parts of India the disease is not active, but Calcutta returned 18 deaths, Patna 20 deaths (this is a sudden increase), and Shahabad 32 deaths (a fresh outbreak). In Karachi there were 15 deaths, in Mysore 295, and in the Punjab 16. The chief changes during the week are the recrudescence in Bengal, the continued increase in Bombay city, and the decline in Mysore. The development in Bengal is especially serious because a few weeks ago it was almost clear and because during the last cold weather there was a high mortality in certain districts. Madras city has up to the present been free from plague,

but during the week ending Sept. 7th the death-rate was 105·9 per 1000. Cholera was responsible for 130 deaths, but the large excess in mortality during several weeks past is not satisfactorily explained. Bombay city has now a death-rate of 66·44 per 1000, the excess being partly accounted for by plague. The city of Calcutta, on the other hand, continues to show an exceptionally low death-rate. There is very little plague, cholera, or small-pox.

In a paper on leprosy recently read before the Calcutta Missionary Conference figures were given relating to the Leper Asylum at Raneegunje which show that the disease is four times as prevalent in the Burdwan district as in the rest of India and that of those in the asylum 33 per cent. had either leper parents or a taint in the family. Of the children born after leprosy had been contracted 9 per cent. became lepers. These are higher figures, I believe, than those of the Leprosy Commission.

A paper recently read before the Asiatic Society of Bengal upon the Habits of the Common Grey Mosquito gave detailed evidence that the female may live in its adult stage for nearly five weeks, that during this adult life it may feed as many as five times, and that it does not feed indiscriminately but has a preference for the blood of the house sparrow. The time of laying eggs would seem to depend on the amount of blood taken. If the insect gorged itself the eggs might be laid in four or five days, whereas on a small meal the egg-laying might be delayed to 14 days. After laying her eggs the female may feed again and lay a second batch of eggs, and if she be able to obtain a meal of blood she will continue to do this during her adult life. A fresh observation recorded in the paper concerns the structure which forms a part of the lid of the egg. This is best seen in the eggs taken from the body of the insect when near full term. The eggs are capped at the larger end by a transparent, dome-shaped structure which is delicate and is easily broken off. It probably acts as a float. Inside and at the base of this structure is a cup-shaped cell with a hole or depression in the centre. When the float-cap breaks this cell comes away and becomes flattened out and looks like a star.

Sept. 21st.

The Week's Plague Figures. — Bombay Mortality. — The Famine Returns.—Disinfection of Wells on the Outbreak of Cholera.—The Death-rate in Madras City.

This week shows a decline in the number of deaths from plague throughout India. The figures are 5712, as against 6386 for the previous seven days. The most infected places are Bombay city, 236 deaths; Karachi, 11 deaths; Calcutta, 13 deaths; the Bombay Presidency, 4844 deaths; the Bengal districts, 72 deaths; the North-west Provinces, 18 deaths; the Punjab, 57 deaths; and the Mysore State, 342 deaths. In the Bombay districts the chief infected areas are the Poona district, the Satara district, the Surat district, and the Dharwar and Belgaum districts. For the week there is a decline in Bombay city, in Karachi, and in Calcutta, but a rise in the Bengal districts, the Punjab, the North-west Provinces, and the Mysore State. The outlook is ominous.

The letter in the *Times* upon the plague in India deserves further attention. The returns of plague from Bombay city are most misleading. The mortality in this city during the past three years has been enormous and the plague figures only account for part of the excess mortality. It is unlikely that other diseases should have so enormously developed during the plague period as to account for this excess, and the probable explanation lies in the deficient registration of plague deaths. It is high time that further inquiry was made into this anomaly. At the present time the death-rate in this city is nearly 60 per 1000 per annum.

The famine returns still show over 400,000 people as receiving relief. Crop prospects are good in some places, but there has been a deficiency of rain in others, and locusts have caused considerable damage in Bombay, in the Central Provinces, and in Baroda.

It is high time that the farce of colouring the water of the wells and other places with solution of potassium permanganate with the idea of stopping or diminishing outbreaks of cholera should be recognised. A certain amount of organic matter may be destroyed, but that is all. Much more evidence is required to prove its value. In some places after this disinfection cholera has stopped, but in others it has not and the strength of the solution used is not at all likely to kill the cholera bacillus.

The death-rate of Madras still continues excessively high. It is now about 110 per 1000 or double the mean of the past 10 years. Cholera, dysentery, and diarrhœa seem to be the chief causes of this increase. The districts of the city most affected are those on the north and west. The water-supply is not above suspicion and is liable to contamination. An analysis published in the *Indian Municipal Journal* shows pollution to a considerable degree. It is said that certain villages to the north and west have been affected with cholera for some time past and that from them large numbers of labourers go into Madras daily. The sanitary state of these villages is described as terrible. They are overcrowded and their well-water supply is foul to a degree. Many are dependent for their water on the stagnant pools in which they wash and water their cattle. A death-rate of 150 per 1000 in the First Division certainly demands investigation.

Sept. 27th.

MUNICIPAL REPRESENTATIVES ON THE HOUSING OF THE POOR:

A CONFERENCE AT GLASGOW.

(FROM OUR SPECIAL COMMISSIONER.)

(Concluded from p. 945.)

THE afternoon sitting of the first day began by the reading of a paper which proved once again that "distance lends enchantment to the view." Bailie D. M. STEVENSON (Glasgow) opened the proceedings by introducing the question of the caretaking of tenements. He attributed the Scotch custom of living in flats instead of separate houses to the intimate relations that had subsisted between Scotland and France. Bailie Stevenson, however, lamented that "when our French allies brought the tenement system to Scotland they omitted to bring the *concierge* with them." It was fortunate for the worthy Bailie that there were no Parisians present, for he even went so far as to specify more particularly the Paris Cerberus who sits and scowls from the dark recess in the side of the *porte cochère*. Bailie Stevenson thought that the caretaker or *concierge* contributed to maintain the order and cleanliness of the dwelling. In practice, however, I have good reason to know that the *concierge* studies scandal rather than sanitation. How many reputations have been destroyed, duels fought, and families broken up through the prying, gossiping proclivities of the *concierge*. Ready to be bribed by home and foreign criminal and political police and private detectives, the *concierge* tampers with the tenants' correspondence, spies upon their visitors, gives incorrect information, spreads false rumours, and generally causes mischief all round. It is only after a harsh experience that the tenant may perhaps overcome these inconveniences by resigning himself to the necessity of plying his *concierge* with numerous soft words and many hard coins. Of course, some *concierges* are very worthy people, and I knew one Parisian *concierge* who warned his Russian tenants that he kept their correspondence back for the Russian political police to read before putting it up on the letter-rack. These, perhaps it may be said, are considerations that have no direct bearing on sanitation; but, on the other hand, it would interfere with the popularity of improved dwellings if anything like the grievances which have grown up around the institution of *concierges* in France were introduced into Scotland or England. Caretakers there should be, living above, below, or on the side of the block of the flats or tenements, but not at the entrance door watching every movement and every visitor, receiving all the correspondence and answering all the questions. The caretaker may be a useful servant but the *concierge* is a terror and a tyrant. The unpopularity of the *concierge* in France should serve as a warning in regard to the manner in which caretaking is organised in England. The *concierge* is essentially a doorkeeper and a spy. What is wanted is a rent-collector who shall at the same time be a caretaker and an inspector. The object is not to interfere with the liberty of the subject by spying out all the details of his private life, but to see that he keeps his home clean and does not inconvenience his neighbours. Paris, however, is a long way from Glasgow, and if the *concierge* suggests many obstacles and objections there is no doubt that in Glasgow the caretaker has rendered good service. Bailie Stevenson related that 10 years ago the Glasgow Workmen's Dwelling Company tried to supply

cheap, wholesome tenements, but the conduct of some of the tenants was such that they would soon have converted model dwellings into new slums. Consequently resident caretakers were appointed and they policed the dwellings so well that the destructive and disorderly tenants were soon driven away or reformed.

Mr. W. C. M'BAIN (Glasgow) thought that there was more done in the way of sifting than of reforming. The root difficulty rested in the tenacity with which a certain class clung to their dirty and shiftless habits. These people must be raised and this would not be accomplished by driving them from one locality to another. Authority to control them was required. This the landlords did not possess, but the corporation, in their capacity as magistrates, had to deal with applications for the eviction of dirty and destructive tenants. As yet, however, the magistrates had not really taken up this question.

Mr. H. C. RICHARDS, M.P., argued that when dealing with the undesirable class of tenants the question of caretaking was most important. The caretaker must be strong, firm, and yet kind and sympathetic. The success of a large block of tenements depended, in the main, on the skill and efficiency of the caretaker. This was the case in the Peabody and Guinness dwellings where they had a good class of tenants, and the good that caretakers could do would be much greater where the residuum was taken in.

Mr. WILLIAM HOLDER (chairman of the Unhealthy Dwellings Sub-Committee of Hull) read a paper on the Clearing of Insanitary Areas. He condemned the extravagances and delays resulting from the application of Part I. of the Housing of the Working Classes Act. At Hull they had applied Part II., though it was only intended for insanitary houses and not for areas; but it was quicker and cheaper to proceed separately against the owner of each house than to try to apply a large scheme. In this manner they had demolished 385 houses in five different districts. This was quite as important as any scheme, but it was not a scheme within the meaning of the Act. Therefore they were able to dispense with the intervention of the Local Government Board. All that they had to do was to be quite certain that the houses which they wished to destroy were really unhealthy. Then they obtained a magistrate's order on the evidence of their own officers, backed by the photographs they took of the places which were visited. They thus proceeded against several contiguous houses, and they had cleared a whole street without incurring any cost. The process was very simple. A house once condemned as unfit for habitation had to be closed. If the owner did not rebuild or repair it he must pull it down. After a short lapse of time, if this was not done the town council proceeded to demolish the house, paid the cost out of the proceeds of the sale of the materials, and gave what balance there might remain to the owner. Some of the houses which had been thus treated at Hull were inhabited by the most depraved population that could possibly be found in a seaport town. It was a moral cleaning of the neighbourhood; the scattered population had now to conform to the more decent conduct of those among whom they had gone to live. Under Part II. of the Act the question of rehousing was not raised; and at Hull, fortunately, there were fairly cheap cottages not too far from the slum districts that had been destroyed.

Councillor INNES (Derby) also read a paper on the subject, and alluded to the affection which people bore for the slums in which they were born. The aged, more especially, preferred ill-ventilated and crowded dwellings. They dreaded brightness and light, and also feared the monotony and dulness, the absence of shops and crowds in the suburban districts. Therefore he urged that theatres, reading-rooms, baths, and large and commodious public-houses should be provided in the suburbs, so as to entice people away from the overcrowded centres.

Alderman M'GUFFIE (Liverpool) boasted that at Liverpool the best means of dealing with the housing problem had been applied. They had preceded even Glasgow by obtaining a local Act in 1864 and this enabled them to deal with insanitary areas. At the cost of £2,000,000 sterling they had dealt with from 10,000 to 12,000 insanitary houses. The speaker seemed to think that the Poor-law authorities should look after the extreme poor and that the city council should attend to the affairs of the rich and the poor alike. People were driven out of insanitary houses not for their good but for the good of the community.

Alderman M'DOUGALL (Manchester) explained that they had endeavoured to utilise existing dwellings and to render them wholesome by demolishing such structures as prevented a through draught. Thus 800 houses had been pulled down out of 6000, and now the remaining houses had backyards and more air-space. The only cost was that of prosecuting the owners so as to compel them to effect these improvements. The owners were called upon to pull down one out of every four houses or else all the houses would be closed. By these means the bulk of the population were not disturbed, but were kept near to their work and their homes were rendered much more healthy.

Mr. D. S. WATERLOW remarked that these suggestions scarcely applied to London, for the metropolitan magistrates would not give a closing order unless it was shown where the people could be taken when unhoused. Nor did the London authorities take upon themselves to instruct landlords how to render their property sanitary as seemed to have been done in Manchester.

Councillor HOLDER, replying, remarked with regard to the boasted achievements at Liverpool that in no town were there so many waifs and strays and such squalor and misery. Concerning the position in London he thought that the magistrates had no right to insist on rehousing under Part II. of the Act. At Hull private enterprise provided four-roomed cottages for 3*s.* 9*d.* per week on the outskirts of the town. The land cost 10*s.* the yard and the building cost £180. The walls were nine inches thick. The plans were not up to the Local Government Board standard. The fact that Hull was entirely a freehold town greatly simplified matters.

The members of the Conference then adjourned to visit some of the dwellings erected by the Glasgow Corporation, and these interesting investigations were only concluded at the approach of night.

The morning sitting of the second day was opened by Mr. PETER FYFE (chief sanitary inspector of Glasgow) who gave an admirable statistical account of the farmed-out houses. The house-farmer would rent an entire block holding from 10 to 35 one-roomed and two-roomed tenements, and he paid on an average 6*s.* 9½*d.* per month per room. These rooms the house-farmer furnished with a few absolutely necessary articles which barely cost more than 30*s.* per room. The house-farmer then let these rooms for 10*d.* per day, or 5*s.* per week. Deducting 10 per cent. for unoccupied rooms, Mr. Fyfe calculated that the house-farmers in North Glasgow made a profit of 53¼ per cent.; in the eastern districts 70 per cent.; in the southern 60 per cent.; and in the western 63¾ per cent. A recent census showed that the average earnings of the tenants were 22*s.* per week, but they varied from 8*s.* per week paid to female hairworkers to 42*s.* 6*d.* paid to bricklayers and masons. According to the confession made by the inhabitants themselves 47 per cent. had been reduced to this mode of living by intemperance. In some parts of Glasgow from 10 to 20 per cent. of the tenements were not inhabited and were marked "empty." There was room, therefore, to lodge these people, but when it was suggested to them that they should save a pound or two to buy a little furniture they only replied with a sickly smile. They were paying to the house-farmer double the rent they need pay if they only saved to buy a little furniture; but while the public-houses remained open they would never save. He did not think that philanthropic furnishing associations, or municipal lodgings, or the most active of caretakers could help these people. Perhaps a law to prevent the pawning of the necessaries of life might be useful, but the poverty-stricken dipsomaniac could only be cured when alcohol was placed beyond his reach.

Bailie W. F. ANDERSON explained that in Scotland rebuilding was not insisted upon if there were houses available for the evicted tenants within a mile of their former dwellings. The Corporation of Glasgow had bought up the worst property in the town, but the people would not go to the tenements which the corporation had erected; they, on the contrary, endeavoured to find houses even worse than those from which they had been evicted, but as the corporation were destroying the worst houses some improvement had resulted. The municipality had secured the better class of tenants, leaving private enterprise to provide for the worst class. The latter preferred to pay high rents rather than to submit to any sort of control. Bailie Anderson thought that farmed houses should be licensed and controlled by some authority, otherwise those who were displaced would go into other dwellings and convert them into slums.

Dr. A. K. CHALMERS (medical officer of health of Glasgow) read an important paper showing that even with a dense population and in an unwholesome locality the death-rate could be reduced by better housing. The worst district in Glasgow, Bridgegate and the Wynds, had a death-rate of 44 per 1000 in 1891–92. For the two following years the average death-rate was 36 per 1000, and in 1899–1900 it had fallen to 27 per 1000. By the operation of the Improvements Department the population of that district had been reduced from 5689 in 1891 to 4098 in 1900. During these 10 years a portion of the houses on this area had been reconstructed; and during the last two years 1387 persons had been lodged in 361 newly built tenements. Among these people only 40 had died, which was equal to a death-rate of 14·4 per 1000 per annum. On the other hand, in the same district near Jail-square there still remained some of the old tenements which continued to house the old class of tenants up to the adoption of the Improvement Bill in 1897. In this district during the three years preceding the application of the reforms authorised by the Bill the average annual death-rate was 53 per 1000. Therefore, side by side, on a soil equal throughout in pollution, they had one set of poor people with a low death-rate and another set with a high death-rate. Nor was the reduction of the density of population the only factor. If they took the city of Glasgow as a whole it would be found that the density of population amounted to 2·032 persons per room and the death-rate to 21·07 per 1000. The model dwellings built by the Improvement Trust gave a density of population of 2·271 per room and in Catherine-court of 2·526 per room. Thus there was a greater average density of population in these model dwellings, but the deaths were equal only to a death-rate of 15·7 per 1000. These dwellings covered 56·3 per cent. of the site on which they were built. Thus a considerable number of persons could be crowded together if the tenements they inhabited were well built and well managed. It was moral and material filth rather than density of population that produced a high death-rate.

Mr. JOHN MANN, jun., who spoke on behalf of the Workmen's Dwellings Company of Glasgow, urged that it was the housing of disinherited or rejected undesirable tenants which constituted the crux of the problem. Municipal enterprise should deal with the whole of any class, otherwise injustice and privilege would result. Such action also would tend to the benefit of the entire community. Municipal intervention was especially needed in regard to the dangerous residuum, but no congress had suggested how this was to be done, only some details as to the building of a cheap shelter had been given. At present the residuum was left to the mercy of the most unscrupulous of speculators. Under such circumstances it was surprising that so many decent people could still be found in the slums. His company carefully selected their tenants and those who did not respond to the expectations were sent away to drift back into the slums. For such as these the municipality ought to build experimentally cheap blocks or shelters. When these shelters were ready the law against overcrowding should be rigorously enforced and thus the disorderly residuum would be driven from pillar to post. Private enterprise could not do this. The saving in epidemic disease and in crime would compensate the cost of such measures. There were houses where the beds were never cold, for the day tenants succeeded the night tenants in rapid succession, but this pressure would be reduced by the competition of city shelters. For these latter there should be no standard of character. Willingness to enter should be the only qualification. Having thus provided for the needs of the residuum, the police and sanitary authorities should bring full pressure to bear on landlords. The absentee landlords should be followed up and warned that their houses would be closed and condemned as nuisances. The magistrates would no longer hesitate to sanction ejections when it was shown that the tenants could be lodged more healthily in the city shelters.

The LORD PROVOST insisted that there was a considerable class who were not criminals, who earned good wages, often as much as £5 a week, and who yet lived in the most filthy and crowded manner because they squandered their money on drinking. It could not be the duty of the corporation to provide cheap homes for men who earned £5 a week.

Councillor JOSEPH B. COLTON (Liverpool) spoke sarcastically of the bicycles and pianos which he had seen in the Glasgow municipal tenements, while in Liverpool, he maintained, they had striven to house those whose only furniture consisted of an orange-box for a bed and a tin can for cooking purposes. In Liverpool their by-laws compelled them to spend 8½*d*. per foot for their building, while in Glasgow they had erected tenements at 4½*d*. per foot, but they were very inferior to the Liverpool standard. It was not surprising that people resorted to public houses when their homes were so gloomy.

Councillor COOPER (Aberdeen) did not believe in colonising and keeping together members of the same class. At best it only meant a little more room and air; the same social surroundings would produce the same vices. The slum population must be scattered, made to live with a better class, so as to engender in them a sense of shame. It was a mistake to strive to rebuild other, even if more sanitary, slums.

Bailie BROWN (Edinburgh) said that they had spent £150,000 and built a good class of houses, but the residuum would not come and live in them. They had made mistakes, and the more that they knew about the problem the more difficult it seemed. The moral question was the most difficult. What were they to do with prostitutes and with the tenants who said that the municipal houses were too bright to hold their shabby furniture? They had to take in a better class of people, though their object had been to help the inferior, the lowest, class.

Miss HELEN KERR, of the Edinburgh Social Union, wanted to know what percentage of a labourer's wage should go to the payment of rent, but she obtained no answer to her question.

Mrs. D. L. DOCKRELL explained that in Dublin similar difficulties existed, especially that arising from the conversion of houses built for only one family into tenements where many families lived together.

Alderman CARTER (Sheffield) urged that society would not tolerate much longer the squalid condition in which some people lived. Therefore greater powers should be obtained from Parliament to proceed against those who squandered their money. On the other hand, they must be careful that in supplying ready furnished houses they did not encourage improvident early marriages.

Alderman JOWETT (Bradford) attacked the housing of the middle and upper classes of Scotland who, for instance, allowed their servants to sleep in the kitchens where all the food was cooked. The middle classes should give a better example.

Alderman DOYLE of Dublin said that they had been obliged to pay from £5000 to £11,000 per acre for slum land in Dublin, and now the Government refused to sanction further loans. What were they to do? The land and the houses should be accepted as security for the money borrowed.

The discussion was brought to a conclusion after some further description had been given of what had been achieved in Glasgow.

The afternoon sitting was devoted mainly to the consideration of the motions. Mr. JOSEPH B. MASSEY (sanitary inspector of Burnley) found time, however, to read a paper urging municipalities to start cheap tramways to relieve the congestion in the centre of the towns, but this did not lead to a debate. There was a good deal of conversation rather than speech-making over the motions, and some of the words were altered. The words "deserving poor," for instance, were withdrawn and the word "people" was put in their stead, for it was strongly felt that the undeserving poor constituted one of the most important features of the problem. The first motion asserted that it was the duty of the municipal authorities to provide cheaply-constructed but improved dwellings, and that for this purpose more extensive powers must be obtained from the Legislature. To this end the second motion stated that:—

1. Simpler and less costly machinery should be devised and sanctioned by Parliament for enabling local authorities to put in force and carry out the provisions of the Housing of the Working Classes Acts. 2. That authority should be given to municipal corporations and other local authorities to acquire at its market value, by as simple and inexpensive a method as possible, and without any allowance for compulsory purchase, land for the present or prospective erection and maintenance of dwellings for the population to be displaced by the abolition of slum properties. 3. That any sinking fund required to be set apart for repayment of moneys borrowed for such purposes should apply to the cost of buildings only and not to land, and should be extended over a period of not less than 60 years, and that municipal corporations and other local authorities should be empowered to build such buildings in accordance with their own by-laws and not be required to satisfy the requirements of the Local Government Board.

Finally, a third motion was adopted to the following effect:—

That a joint representative committee be appointed by this Congress

for the purpose of adopting such measures as may be deemed requisite or expedient for bringing the several matters referred to in the first and second resolutions under the consideration of Parliament and for obtaining remedial and supplementary legislation thereon.

On the adoption of this motion the committee in question was at once appointed, and consisted of leading representatives from Glasgow, Edinburgh, Dundee, Aberdeen, London, Manchester, Liverpool, Newcastle, Sheffield, Dublin, Sunderland, Plymouth, and Leeds; the Lord Provost of Glasgow to act as secretary or convener.

This concluded the business of the Conference, but its members did not separate without first passing the usual complimentary vote of thanks to the Lord Provost and the Corporation of Glasgow for the useful initiative which they had taken in convoking the Conference and for the hospitality which they had bestowed on its members. Thus ended a memorable meeting. Perhaps it will be said that there were not many new proposals, ideas, or suggestions brought forward; but in any case what was only vaguely felt before has now been emphasised, explained, and rendered clear. All who assisted at the Conference have surely obtained a broader grasp and a more detailed knowledge of the subject. But there were some new suggestions, though these were not perhaps as numerous as might have been anticipated. Also, if the representative committee elected carry forward their mission with energy we may look forward to some practical results.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Distinguished Visitors.

THE renewal of the activity of the medical societies of the town during the coming session is evinced by the notices of meetings already sent out. These include the names of distinguished visitors who are announced to deliver addresses at various meetings. Thus on Oct. 18th Mr. Thomas Bryant will give an address and distribute the prizes at a meeting of the Clinical Board under the presidency of Mr. Bennett May. On Oct. 24th Mr. Victor Horsley will give an address on Medical Reform at a special meeting of the Birmingham and District Medical Practitioners' Union; and on Nov. 7th it is announced that an address on the Treatment of Wounds in War will be delivered by Mr. Watson Cheyne at the meeting of the Midland Medical Society. In their respective rôles it would be difficult to find authorities more entitled to a hearing, and none who will be more welcome to the audiences which gather to listen to them.

University of Birmingham.

The inaugural meeting of the medical faculty took place on Oct. 1st, when the Dean, Professor B. C. A. Windle, received the guests to the number of about 400. The event was celebrated by proceedings of a social character at which the guests were entertained by a musical programme conducted by medical friends whose performances were much appreciated. The different museums—dental, anatomical, and materia medica—were thrown open and entrance was given also to the pathological and bacteriological departments. A demonstration of lantern slides and microscopical slides was given and the various arrangements for teaching in the most modern and approved forms were shown. The evening concluded with a pleasant reunion of old friends and the anticipation of a flourishing and successful session.

Defective Lamps.

Accidents and injuries inflicted by the use of imperfect lamps constitute a good proportion of cases which come before the city coroner. At his court recently an inquest was held upon the body of a young man, aged 21 years, who met his death by a lamp of this kind being thrown at him as a missile. A quarrel occurred during a game of cards, and the lighted lamp was picked up by one of the group and hurled at the deceased. The lamp struck him on the shoulder and, breaking, enveloped him in flames. He was conveyed to the hospital and he subsequently died from the injuries he had received. The coroner in addressing the jury pointed out that this was another case of a lamp which had an earthenware container. In every case which had been before him where a lamp was concerned the vessel had been a china one. A lamp with a metal vessel could be obtained at a moderate price and it was much safer. In instances such as this the lamp would probably have gone out and would not have given rise to fire. How frequently this lesson is inculcated and how often forgotten is a matter of common observation. The cheap lamps with pottery vessels are in common use among the poor and unless some legal restrictions are placed upon their sale we shall continue to hear of similar accidents which can safely be classed as preventable.

The Consultative Institute.

In place of the door-plate so obnoxious to the orthodox profession for some months past the sign of "Ichabod" may be written over the portals of this recent venture. The door-plate has gone—the glory has departed. Conceived in misapprehension, developed in ignorance, and launched into life against the united voice and will of the profession, this inglorious institution has ebbed its life away ignominiously. It will be remembered that when the late occupant of this mulitifarious consultant scheme resigned his position it was loudly proclaimed that there would be no difficulty whatever in finding appropriate substitutes. The scheme was widened and enlarged. Proclamation was made as to the stability of its finances and the demand for its continuance. Advertisements were issued for consultants in various departments of medicine, surgery, and specialties. The result was but an echo of the professional voice which had emphatically demonstrated the futility and uselessness of the whole project. Whatever may have been the responses to the appeal made by the promoters time showed that they did not equal the ardent aspirations and confidence entertained by the prominent members of the administration. The institution has lapsed into a natural death, the effects have been sold, and its memory only remains as that of an unwarrantable and ill-judged attempt to exploit the services of an honourable and hard-working profession.

Oct. 15th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Medical Faculty of University College, Liverpool: Opening Address by Dr. Oliver Lodge of Birmingham University.

ON Oct. 12th Dr. Oliver Lodge, F.R.S., formerly professor of physics at University College and now the principal of Birmingham University, delivered the opening address to the medical students of University College and distributed the medals and prizes.[1] A thoroughly practical address was delivered to a brilliant assembly comprising the Lord Bishop of the diocese and other distinguished citizens. Before the close of the proceedings Professor Herdman unveiled a bust of Dr. Lodge executed by Mr. Allen, a well-known Liverpool sculptor, the likeness being a striking one.

Liverpool Medical Institution Dinner.

The biennial dinner of the Liverpool Medical Institution took place on Oct. 12th. The gathering was a most successful one, the guests including the Lord Mayor, the Lord Bishop, and Dr. Lodge. About 120 gentlemen sat down to dinner.

The Mid-Cheshire Queen Victoria Memorial.

Already £1396 have been raised towards the fund for the extension of the Victoria Infirmary, Northwich, which will be the mid-Cheshire memorial to Her late Majesty Queen Victoria. The Hospital Saturday Committee are making strenuous efforts to raise £200 towards the requisite £4000, and the employés of Messrs. Brunner, Mond, and Company have also warmly taken up the project.

Liverpool Country Hospital for Chronic Diseases of Children.

In response to an appeal made by the honorary treasurer last week subscriptions amounting to £172 have just been announced. At present the committee are indebted to the West Kirby Convalescent Home for 20 beds, hence the appeal for funds to build an independent hospital at Heswall.

Oct. 15th.

WALES AND WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

Cardiff Infirmary.

MR. E. TENISON COLLINS, who has practised as a gynæcologist in Cardiff for some years, has been elected second honorary gynæcologist to the Cardiff Infirmary. Through the

[1] Dr. Lodge's address appears in full at p. 1021.

exertions and munificence of several prominent ladies in Glamorganshire it is now certain that the women's ward, which has been closed practically for more than a year, will be permanently supported by special subscriptions obtained in Cardiff and in the surrounding district. The dearth of junior practitioners is evidenced by the fact that on the recent appointment of Dr. John Mooney of Openshaw, Manchester, to the position of assistant house surgeon he was the sole applicant for the post. At the meeting of the Board of Management of the infirmary held on Oct. 9th it was stated that the Cardiff workmen have only contributed during the present year £258 towards the funds of the institution, while the colliers, who in some districts have to support their own local hospitals, have contributed £498.

British Dental Association.

At the annual meeting of the South Wales and Monmouthshire branch of the British Dental Association held at Swansea on Oct. 10th Mr. H. J. Thomas in his Presidential Address drew attention to the large number of men who were refused admission to the army and navy on account of the poor condition of their teeth, and stated that a few years ago when a recruiting war-vessel visited Swansea 20 per cent. of the boys offering themselves for service were rejected for this reason. Mr. J. C. Oliver of Cardiff urged that information as to the proper preservation of the teeth should be disseminated by the State and that every child attending a public elementary school should have his or her teeth periodically examined during the whole period of school life. It was resolved to send a communication to the school boards and boards of guardians in South Wales and Monmouthshire reminding them that it was their duty to see that the teeth of children under their care were looked after and pointing out the injury that was being done to children by the loss of their teeth.

The Anatomy Act at Bristol.

At the meeting of the Bristol Board of Guardians held on Oct. 11th several members of the board strenuously opposed an application for permission to remove to the Bristol Medical School the bodies of persons who have died in the Eastville Workhouse without known relations or friends. Permission was ultimately given. It is a pity that those who seek to curtail opportunities for anatomical study do not take the trouble to ascertain the provisions of the Anatomy Act whereby it is impossible for any person to say that the body of any relative or of anyone he has known has been removed under the Act to a medical school.

The Prevention of Consumption.

The Gloucester, Somerset, and Wiltshire branch of the National Association for the Prevention of Consumption and Other Forms of Tuberculosis has purchased a site of 50 acres at Winsley, near Limpley Stoke, upon which to erect an institution to be called the Royal Victoria Memorial Sanatorium. The site has been levelled and plans of the building have been prepared and at a meeting of the general committee of the branch held on Oct. 8th it was stated that of the £3176 already subscribed £2000 have been expended upon the purchase and preparation of the site and that a further sum of £9000 must be raised before the committee would feel justified in beginning to build.—The Urban District Council of Aberdare has decided to distribute from house to house the address which Dr. Isambard Owen delivered at the recent conference at Cardiff. The death-rate from phthisis in Aberdare in 1900 was 1·1 per 1000.

Bristol Water-supply.

Since the year 1846 the water-supply to the city of Bristol has been provided by a private company. With the experience of other large towns before them the city council has from time to time passed resolutions affirming the desirability of the supply being in the hands of the corporation, and about seven years ago instructed a committee to inquire as to the practicability of the purchase of the water undertaking. This committee reported to the council in 1898 that the waterworks company were not prepared to sell their property, and again reported on Oct. 8th last that after taking counsel's opinion they found that the corporation could not enforce any reduction of the present charges made by the company, and further that there was now a constant and efficient supply of water to the city. In the report of the medical officer of health for 1900, Dr. D. S. Davies states that as the company has power to make an annual charge for each closet flush very many outdoor closets throughout the city are dependent upon hand-flushing. The average daily supply of water per head is calculated at about 22 gallons and no case of disease, says Dr. Davies, has ever been traced to its use. At present there are three storage reservoirs capable of holding 750,000,000 gallons and there will be completed early next year a fourth reservoir with a capacity of 1,700,000,000 gallons, when the reserve will be equal to nearly 250 days' supply. The water is obtained from springs in the triassic conglomerates and in the carboniferous limestone on the sides of the Mendip Hills at points distant from the city from five to 16 miles. A portion of the supply comes direct from springs to the town mains and is unfiltered; the stored water is filtered. In connexion with the new source of supply at Blagdon, in which the river Yeo is impounded, drainage schemes have been constructed by the waterworks company whereby the sewage of four villages will be treated on the septic tank principle.

Superstition in Somerset.

An inquest was held at Ilminster last week upon an old man who was found at the bottom of the stairs of his house with his neck fractured, and a verdict of "Accidental death" was returned. Evidence showed that he was considered to be a "witch doctor" and that farmers and females went to him to have the "evil eye" removed. It was stated that the old man had made a considerable sum of money out of his "patients."

University College, Bristol.

The inaugural lecture of the winter session of University College, Bristol, was delivered on Oct. 8th by the Bishop of Bristol on "The Responsibilities of Inheritance." Mr. P. J. Worsley presided and in his speech alluded to the fact that the College had now completed a quarter of a century of its existence. Mr. Worsley also stated that the present accommodation was inadequate for the work of the College, another block of buildings being required for enlarging the chemical and electrical engineering department, and on the medical side additional laboratory accommodation was required for bacteriological work. The estimated cost of this scheme was about £6000 and this sum it was hoped would be raised by the public spirit of the citizens of Bristol.—The annual distribution of prizes in connexion with the medical department of University College, Bristol, will take place on Oct. 25th. Sir Frederick Treves, K.C.V.O., C.B., will present the prizes.—The annual dinner of the Bristol Medical School will take place at the Royal Hotel on Oct. 25th. Dr. E. Markham Skerritt will preside and Sir Frederick Treves is to be the guest of the evening.

Oct. 14th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Carnegie Trust and the Payment of Class Fees.

THE secretary of the Carnegie Trust has been authorised to send the following letter to the secretaries of the Scottish universities:—

2, St. Andrew-square, Edinburgh, Oct. 14th, 1901.

DEAR SIR,—It may be useful for the officials and students of your university to know some of the more general considerations which have guided the Executive Committee in deciding upon the claims of applicants for payment of class fees in the Scottish universities and in the extra-mural classes in Scotland, attendance at which is recognised as qualifying for graduation.

Three qualifications have been demanded. The applicant (1) must be over 16 years of age; (2) must be of Scottish birth or extraction, or must have given two years' attendance after the age of 14 at a school or institution under inspection of the Scotch Education Department; and (3) must be qualified by preliminary examination under the ordinances of the Scottish Universities Commission and the regulations of the Joint Board of Examiners to attend the classes for which payment of fees has been claimed.

In estimating the claims of applicants the committee have had under consideration the advisability of taking into account the financial aid which such applicants may be at present receiving from bursaries or other sources. They are of opinion that the bodies granting such aid are the proper judges of the intention of their benefactions and the needs of their beneficiaries.

It has been impossible in the circumstances of inaugurating the work of the trust to foresee all the particulars which for the purposes of the committee are required from applicants. This is only referred to in order to make it clear that the details of the present arrangements may be reconsidered in the light of further experience.

Two points may be mentioned. In the first place, the committee have resolved that they must insist in all cases on proof of the capacity of the applicants. It is obvious that in fairness the standard should so far as possible be the same for all, but this is not easily attainable under the existing regulations for the preliminary examinations of the universities. The committee have for the present followed the standards of preliminary examinations for the various faculties laid down by the Universities Commission.

In the second place, it is the duty of the committee to satisfy themselves of the conduct and progress in the studies of students receiving benefit from the fund. It has been, of course, impossible to enter on this occasion upon an investigation of the career of all the applicants. Many of them have already attended classes for several sessions. But it is proposed to make it a condition that every student whose fees are paid must submit to the committee a report or certificate from the professor or lecturer whose class he has attended establishing that his use of the opportunities afforded him has been satisfactory. Many applicants have applied for a large number of classes. In some cases the committee have thought it necessary to restrict demands for classes obviously in excess of what can be usefully taken.

On these points the committee would welcome the opinion and co-operation of the universities.—I am, yours truly,

W. S. M'CORMICK.

Ruchill Fever Hospital, Glasgow.

The first report of the recently opened hospital for infectious diseases, by Dr. A. Johnston, the physician superintendent, was presented to the Glasgow Town Council on Oct. 14th. It covers the period of time from Sept. 10th, 1900, to May 31st of the present year. The original plan of organisation was to close the hospital in Kennedy-street and to draft the staff to Ruchill. Owing to the small-pox epidemic this proposal had to be abandoned and the two hospitals were used for a period of nearly six months to accommodate all infectious cases other than small-pox, the latter being sent to Belvidere. The number of cases admitted to the two institutions during the year ending May 31st, 1901, was 3615. The mortality, it is gratifying to note, was only 6·8 per cent. Dr. Johnston draws special attention to the remarkably low death-rate in the cases of scarlet fever—viz., 2·8 per cent. In discussing the report Councillor Maxwell claimed that a large measure of credit for these satisfactory returns was due to the corporation for their enterprise in improving the housing conditions in various parts of the city. The necessity for constant official protection of the public health was well illustrated by a recent incident in which the carcass of an ox consigned from Ireland to a meat salesman in Glasgow was after examination found to be affected with anthrax. So far no prosecution has taken place, but the matter, it is to be hoped, will not be allowed to rest.

Suspected Case of Plague in Glasgow.

Some not unnatural anxiety has been created during the past week by the rumour that a case of plague had been removed from a vessel in the harbour. It appears that a Lascar seaman was found on one of the steamships lying in the Govan Docks with a somewhat mysterious illness, and that by the advice of the medical authorities he was removed to the local hospital for infectious diseases. Though technically both the vessel and the patient were outside the sanitary jurisdiction of Glasgow it was wisely and properly decided to ask the opinion of Dr. Chalmers. The mystery is not yet fully cleared up, but Dr. Chalmers reports that there is no evidence to warrant the assumption that the case is one of plague.

Faculty of Physicians and Surgeons, Glasgow.

Mr. George Burnside Buchanan, B.A. Cantab., M.B. Glasg., having passed the necessary examinations, has been elected a Fellow of the Faculty.—At the recent celebrations in connexion with the eightieth birthday of Professor Virchow an address of congratulation on behalf of the Faculty was presented by Lord Lister, F.R.S.

St. Andrews University.

The winter session was opened on Oct. 8th with an address by Principal Donaldson in which the opinion was expressed that neither the Government nor the public were alive to the national importance of increasing and extending the range and efficiency of university education. He hoped that by means of Mr. Carnegie's great generosity the Scottish universities would now be able, at least in the scientific and modern departments, to take a great step forwards, more especially in the development of original and research work. Regarding the payment of students' fees he considered that the Scottish ideal of securing the chance of a university education for everyone capable of utilising it was a sound one and he cordially accepted the conditions which the trust has already defined. The students of the colleges at St. Andrews and at Dundee have decided to invite Mr. Carnegie to come forward as a candidate for the position of Lord Rector of the University. At a meeting of the Senatus Academicus on Oct. 12th Mr. R. B. Haldane, K.C., M.P., was appointed lecturer on natural theology under the conditions of the Gifford Trust. The duties consist of the delivery of some 10 lectures during the session and the emoluments amount to between £500 and £600. The lectureship is held for two years.

Oct. 15th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Nursing in Irish Workhouses.

DR. COX, in his inaugural address at St. Vincent's Hospital, dealt with the subject of nursing in Irish workhouses and advocated strongly the cordial support of the Local Government Board in their recent efforts to secure efficient training for nurses. He showed that it was essential that the education of nurses should be carried out in the large and fully equipped clinical hospitals of the metropolis, instead of being relegated to provincial and non-teaching institutions. The *Irish Times* in a leading article on Oct. 9th said that Dr. Cox had done a great public service in making the question of the proper training of nurses the subject of his able address. Dr. Edward Thompson, M.P., while advocating the full and efficient training of nurses, holds that they could be best trained in suitable provincial hospitals previously inspected and certified as to their efficiency by the inspectors of the Local Government Board. A long letter on the subject from him appeared in the *Irish Times* of Oct. 15th.

Irish Workhouse Association.

A committee meeting of the above was recently held at 22, Lincoln-place, Dublin. The attendance included Lord Monteagle (president), Lady Monteagle, Mrs. Haslam, Dr. Katherine Maguire, Mrs. Leonard, R.D.C., Dunsany; Dr. Moorehead, Cootehill; Mr. W. M'Murrough Kavanagh, and Mr. Charles Eason. The chief matters considered by the meeting were the condition of the sane epileptics at present in Irish workhouses and the question of nursing in Poor-law infirmaries, with special reference to the revised general order recently issued by the Local Government Board. An announcement was received from the Belfast branch of the association to the effect that it is intended to hold a conference in that city early next month for the purpose of considering several important matters in connexion with Irish Poor-law. It is hoped that the conference will be well attended, and that it will be productive of much good.

The Meath Hospital and County Dublin Infirmary.

The address introductory to the one-hundred-and-forty-ninth session of the Meath Hospital was delivered on Oct. 14th by Mr. William Taylor, surgeon to the hospital, in the presence of a large assemblage. The subject dealt with was Modern Progress in Surgery.

The Royal Victoria Hospital, Belfast.

The City Corporation of Belfast are about to promote an "omnibus" Bill in the next session of Parliament, in which, amongst other matters, provision will be made for the council having authority to make a further grant of six acres for the purposes of the Royal Victoria Hospital. This is to be provided from the old asylum grounds (owned by the corporation) in order to make the institution more perfect.

The Health of Belfast.

The report of the medical officer of health presented to the City Corporation of Belfast on Oct. 1st showed that during the past month 679 cases of zymotic disease have been notified—viz., 374 typhoid fever, 208 simple continued fever, 32 erysipelas, 27 diphtheria, 25 scarlet fever, seven membranous croup, and six puerperal fever. There were 159 deaths registered from zymotic diseases, 64 from phthisis, and 56 from diseases of the respiratory organs. The total annual death-rate was 22·0. The regretful features of this alarming report are: (1) that there is a considerable increase in the number of notifications of zymotic diseases; (2) that the outbreak of typhoid fever still continues and now the disease seems to be prevalent in all the districts of the city, and, unfortunately, the deaths therefrom are also more numerous; and (3) that the cases of diphtheria have also increased. It is satisfactory to find some crumbs of comfort inasmuch as the deaths from measles number seven as compared with 19 in the last report, and scarlet fever (apparently now a very mild zymotic in Belfast) caused only one death in the month. In the discussion which followed attention was drawn to the delay in changing from dry- to water-closets in the small houses in its effect as regards outbreaks of typhoid

fever, to the importance of inspection of butter-milk, the prevention by milk-vendors of the mixing of milk, and the supervision of ice-cream vendors. Councillor J. D. Williamson, M.D. R.U.I., advocated the inclusion of measles and phthisis in, and the elimination of continuous fever from, the notifiable diseases.

The Belfast Board of Guardians.

At a meeting of this body on Oct. 1st it was decided to erect a nurses' home in connexion with the fever hospital to accommodate 36 nurses. A suggestion from the Infirmary Committee to improve the dietary of the nurses and medical officers and apothecary was rejected. It is hard to understand the policy of a board who are anxious to expend £13,000 in building a new board-room and offices and who at the same time decline to make the dietary of their medical officers and nurses (13 have had typhoid fever) equal to that of any third-class hospital in England. All the long discussion was over the question of giving each hospital nurse one chicken instead of one between four, and of substituting 10 pints of milk instead of eight, a pound of pork (in case they did not take the equivalent in chicken), a quarter of a pound of cheese per week, half a pound of oatmeal, and half a pound of jam or marmalade, with pickles, butter, and salt, for the resident medical officers. Nothing is in the long run worse than this "penny-wise-and-pound-foolish policy."

St. John Ambulance Association.

The annual meeting of the Belfast branch of this association was held on Oct. 11th. It was reported that during the year 18 first-aid classes were held and were attended by 410 pupils, and four nursing classes which were attended by 67 pupils—in other words, there were 22 classes attended by 477 pupils. A new feature had been the instructing of men in "home nursing of the sick" and 16 certificates were granted to members of these classes. The work of the firemen who form the Belfast division of the St. John Ambulance Brigade was highly appreciated and they received 1867 calls. The distance traversed by the ambulance carriages was 4487½ miles, or an average of two and a half miles per single journey. Financially there is a small balance to the credit side of this Belfast branch.

Opening of the Winter Session in the Belfast Medical School.

The present winter session (1901–1902) of the Belfast Medical School began on Oct. 15th when the introductory address at the Royal Victoria Hospital was given by Dr. Robert Campbell, one of the assistant surgeons. After welcoming the students and giving them some admirable advice, Dr. Campbell said that he regretted the present unfortunate condition of university affairs in Ireland. Apparently every 20 years or so that question was thrown into the crucible by various Governments and he deplored the apparent determination on the part of some of the present Ministers to yield to sectarian clamour. Dr. Campbell then proceeded with his address on the Limitations of Surgery, in which he showed the lines upon which further original work was needed. He illustrated his remarks by reference to sepsis, tuberculosis, and cancer, and said that they wanted further information as to the chemistry of the blood in these diseases and as to the general constitutional condition present. Dr. Campbell's address, which was full of humour, sound common-sense, and apt illustrations, was loudly applauded at its conclusion by his colleagues and the large audience of students present. Classes began at the College in the afternoon.

Monaghan District Lunatic Asylum.

At the monthly meeting held on Oct. 10th it was reported that there were 465 male patients in the institution, while the statutory accommodation was for 362—that is, 103 male patients in excess of the limit, a condition of overcrowding prejudicial to the health of the patients as well as to their recovery. It was decided to ask the guardians of the workhouses in Cavan and Monaghan if they would receive harmless certified lunatics, and if so, how many, in case £20 per annum were paid for the maintenance of each lunatic. The Inspectors of Lunacy and the county council were also asked to approve of this arrangement in view of the large expense that the extension of the asylum would involve.

The Armagh Guardians and the Local Government Board.

At a meeting of this Board held on Oct. 1st a letter was read in reply to the resolution of the guardians calling upon the Local Government Board to withdraw their allegations against the medical officer of the union (see THE LANCET, Oct. 5th, p. 947), and it was decided unanimously that it should be marked "read," the chairman observing that it was the proper way to treat such a letter.

Oct. 15th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Distribution of Antimony in the Organism after Ingestion.

AT the first meeting of the Academy of Medicine held after the holidays M. Pouchet read a very interesting paper upon some experiments which he had made upon animals with a view to find out how antimony would be found distributed in the organism in cases of chronic poisoning, especially as compared with the distribution of arsenic. The results were notable from a medico legal point of view. A rabbit weighing 1095 grammes was fed for 50 days upon a diet in which were contained 30 meals to every one of which had been added five milligrammes of tartar emetic. The animal thus received in all 150 milligrammes of the salt corresponding to 54 milligrammes of antimony. The rabbit was killed and upon examination the antimony was found to be distributed chiefly in the digestive apparatus, while the skin, the fur, and the nervous system—that is to say, the tissues in which arsenic is most appreciably found—contained a mere trace of antimony. In other animals it was found that the addition of arsenic to the antimony, even in a very small proportion, affected the skin and the nervous system at an earlier date and more seriously than pure arsenic. In those animals which died from mixed poisoning the brain, the muscles, and the spinal cord, together with the liver, contained arsenic and very little antimony. The skin and the fur contained a large quantity of arsenic and more antimony than the tissues previously mentioned, while the digestive tract contained but little arsenic and the greatest proportion of antimony. If bromide of potassium were administered together with the poisons both the symptoms of poisoning and the distribution of the poison were considerably modified.

The Plague at Marseilles.

There has been no new case of plague among the passengers of the *Senegal*, but complaints continue to be made about the very unsatisfactory condition of the lazaretto at Frioul. It affords hardly any shelter from the weather and neither doors nor shutters fit. The sleeping-rooms are so damp that the plaster is falling off the ceilings, and the walls and the floor are in a terrible condition of dirt. Complaints come from all sides, one result of which has been that the corridors have been swabbed out with carbolic acid. The cooking and table arrangements leave much to be desired, and, as might be expected, it is very difficult to get cooks or servants, for they are all afraid of infection. Food is sent in from Marseilles and given to the unfortunate people in the lazaretto through a grating which is placed at a distance of three metres from a second grating where one of the sanitary officials takes it in.

The Accident to Dr. Calmette.

I have already acquainted your readers[1] with the main facts as to the accident to Dr. Calmette, the Director of the Pasteur Institute, who was dangerously bitten in the hand by one of his rattlesnakes while he was making experiments. Dr. Calmette immediately inoculated himself with his anti-venomous serum and the immediate results were, apparently, exceedingly satisfactory. Since then, however, although the wound had almost entirely healed, local complications occurred in its vicinity and Dr. Calmette has unfortunately had to undergo amputation of the ring finger of his right hand.

A Revolver Bullet Extracted from the Surface of the Lung.

At a recent meeting of the Society of Surgery M. Loisin reported the case of a soldier who had been brought into the hospital at Val-de-Grâce. The wounded man had been shot with a revolver, the bullet of which had penetrated the chest at the level of the outer end of the clavicle. By radiography it was perceived that the bullet lay in the second intercostal space, some centimetres from the edge of the sternum and at a depth of from two to three centimetres from the surface. The second intercostal space was incised, but the bullet could not be discovered, despite repeated probing with a

[1] THE LANCET, August 31st, 1901, p. 622.

very fine trocar. Some little time afterwards, however, the x rays were again brought into use by means of the Contremoulins apparatus, and it was seen that the bullet was where it had been seen before. Another incision was made, the pleura was opened, and on the lung retracting it was found to be easy to seize the bullet with a pair of forceps and to remove it, since it was only covered by a very thin layer of pulmonary tissue. The bullet was a Mauser rifle bullet of a diameter of seven millimetres, and the wounded man made a perfectly uneventful recovery.

Oct. 15th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Plague at Naples.

ONLY one fresh case of plague has been reported at Naples during the past week and none from any other part of Italy. The new case was in a girl, 13 years of age, and is the first attack in a female. Death took place two days after the patient's removal to Nisida, the symptoms having been virulent from the first. Another death occurred there on Oct. 9th of a man who had been seized with the disease on Sept. 21st, and had therefore had an illness of fully 18 days' duration. There appear to have been altogether 21 cases, with seven deaths, since the commencement of the outbreak up to the present time, but as yet no official statistics are available in regard to this. The greater number of the "contacts" have been set at liberty, but according to the terms of the Venice Convention the occurrence of the fresh case prevents the authorities from giving the port "libera pratica" until 10 days after its isolation. The required period will not thus elapse before Wednesday, Oct. 16th. There are now at Nisida only three persons actually under treatment, 14 convalescent, and 36 still under observation. As a proof that the outbreak is regarded as practically extinguished the announcement is made that the King and Queen, with the infant Princess Jolanda, will arrive at Capodimonte not later than the 25th of this month.

Oct. 13th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

The Bubonic Plague.

TWO suspicious cases, one fatal, of bubonic plague have occurred in Sydney and there has been another fresh case in Brisbane, the patient being a seaman on a steamer trading between Brisbane and Townsville.

Health of Sydney.

Dr. W. G. Armstrong, health officer of the metropolitan district of Sydney, has furnished a report on the health of the city and the work of the sanitary department for the quarter ending June 30th. On the whole the conditions of health in the city were improving. House-to-house inspection had shown that the poorer classes were badly domiciled and careful and prolonged investigations showed that defects of construction and neglect of repairs leading to gross insanitary conditions of dwellings were more common in the poorer quarters of the city than was believed to be the case even three months ago. Whole terraces of houses were found to be dangerously damp and unhealthy from want of proper damp courses or absence of ventilation beneath the floors. The systematic inspection of common lodging-houses had brought to light some very objectionable and insanitary conditions. Unsuccessful attempts had been made to abate the "expectoration nuisance." Disinfection of dwelling-houses where infectious diseases and consumption had occurred had been carried out as far as practicable. Scarlet fever, diphtheria, and typhoid fever all showed an increase on the returns for the last quarter. The outbreak of cerebro-spinal fever had abated, only one death being recorded.

Increase in Cancer.

A deputation recently waited on the Premier of South Australia to request him to provide accommodation for the care and treatment of cancer patients. It was pointed out that the Home for Incurables had done all it could to deal with these cases, but the increase in the disease had been such that this institution could no longer accommodate the cases requiring treatment and a cancer hospital was necessary. It was stated that cancer was largely on the increase all over Australia. The Premier said that he would endeavour to induce the Charity Commissioners to devote some of the funds at their disposal to the erection of a cancer ward in the hospital grounds.

The Notification of Consumption.

The Board of Public Health of Victoria has decided to declare consumption an infectious and consequently a notifiable disease. The chairman of the Board (Dr. D. A. Gresswell) has long been an advocate of notification in the case of pulmonary tubercle and recommended the measure in an address in 1899. He has explained that the purpose of notification is mainly educational in order that patients and their friends may be furnished with proper instructions to prevent the spread of the infection and that the ventilation and drainage of their houses may be seen to and disinfection carried out when a patient leaves. A number of medical men have opposed the action of the Board, pointing out that it is the duty of the health authorities to see to the ventilation and drainage of all houses, not only those inhabited by consumptives; that the medical attendant can see that proper directions are given to the patient and his friends; that notification without its natural corollary of segregation, as in leprosy, is practically futile, and no one at present suggests segregation. On the other hand notification may cause harm to the patient who will be, so to speak, branded and may lose occupation in consequence.

Hospital Affairs.

At the last meeting of the directors of the Prince Alfred Hospital, Sydney, correspondence was received from the Executive of the Hospital Saturday Fund intimating that in future, in the case of patients accepted for admission who are "industrial subscribers" to the Hospital Saturday Fund, and properly recommended, the Fund would guarantee payment to the hospital at the rate of 4*s.* per day. It was resolved that the Executive of the Fund be informed that the hospital could receive no recommendations which would confer upon patients the privilege of being admitted to the wards, and that the only considerations which governed admission were the suitability of the cases medically and the financial means of patients, the hospital being primarily for destitute persons. It may be explained that "industrial subscribers" to the Fund are employés who contribute regularly every week out of their earnings some small sum from (generally) a penny upwards. Originally the Fund was started with the object of financially assisting the hospitals in their legitimate work of giving medical attendance to the destitute sick. But in all the hospitals the practice is extending of exacting payment from patients for their maintenance and according to their means, and in Sydney if an applicant is unable to contribute he has to get an order from the Government medical officer after making a declaration that he is destitute. Then the Government pays the hospital for his maintenance at the rate of £1 a week. The proposal of the Fund Executive would enable individual patients to escape making a declaration and also to escape individual payment, and is practically constituting the Fund into a club for those in receipt of regular wages to enable them to secure hospital treatment, they being a class who ought to receive medical treatment through the means of friendly societies or as private patients of outside medical men.—A deputation from the Sydney Hospital has waited on the Minister of Works to ask him to reserve permanently the site of the Moorcliff Eye Hospital, which is within the Darling Harbour resumption area, and now vested in the Harbour Trust. The Minister replied that the proposed scheme of reconstruction in the locality would probably render the site less suitable for a hospital, and he thought that the committee should look out for a more suitable place. He would consult with the Harbour Trust and if their proposals would not clash with the hospital he would fall in with the views of the deputation.—At the annual meeting of the subscribers to the Women's Hospital, Melbourne, a much-debated question was brought up for discussion—viz., whether married women should be distinguished from single women (in the maternity department). Since the foundation of the hospital married women had been distinguished by the prefix "Mrs." on their bed-tickets, but objections had been raised to the custom. The meeting decided that the existing practice should be continued until separate wards can be made available for married and unmarried patients. The report for the past

year showed that 1778 in-patients had been treated—1359 in the midwifery department. The receipts had been £6507 and the expenditure £7028. The committee regretted the inability to accommodate large numbers of patients constantly seeking admission and hoped that as the result of a special appeal they would be able next year to erect much-needed additions to the wards.

Proposed Dental Hospital, Sydney.

For four years negotiations have been carried on between the Sydney University and the Sydney Hospital with regard to establishing a clinical dental department at the hospital. At the last meeting of the University Senate the Dean of the Faculty of Medicine reported that the proposed arrangements had fallen through as it was found impossible to accommodate a dental school on the site of the hospital. The Senate resolved to establish an independent university dental school and hospital, and a flat at the corner of George-street and Bathurst-street has been leased for the purpose and is being fitted up as rapidly as possible. Many of the Sydney dentists are opposed to the hospital as proposed and want to have a dental hospital managed entirely by the dental profession and not by the University authorities as is done in Melbourne.

The Dentists Act, New South Wales.

The Dental Board of New South Wales has made a number of regulations under the Dentists Act. Among them it is stated that the following are the certificates, diplomas, membership degrees, licences, letters, testimonials, titles, statutes, or documents which will be recognised by the board, under section 12 of the Dentists Act—viz., Licentiate in Dental Surgery of the Royal College of Surgeons of England, Licentiate in Dental Surgery of the Royal College of Surgeons of Edinburgh, Licentiate in Dental Surgery of the Faculty of Physicians and Surgeons of Glasgow, Licentiate in Dental Surgery of the Royal College of Surgeons in Ireland, Licentiate in Dental Surgery of a University in Australia or other British possession, degree of Doctor of Dental Surgery or Doctor of Dental Medicine, conferred by a school, which is either a member of the National Association of Dental Faculties of the United States of America or the diploma of which is recognised by the State Dental Board of the State under whose charter it works, the licence or diploma of any other legally qualified dental school or dental board the certificate of which is granted after not less than three years' study or five years' practice of dentistry and satisfactory examination in the following subjects—viz., anatomy, physiology, histology, bacteriology, pathology, therapeutics, chemistry, metallurgy, materia medica, operative dentistry, prosthetic dentistry, hygiene, and orthodontia. It is further provided that the Dental Board shall from time to time hold, or cause to be held, examinations in theory and practice of persons being registered as dentists and shall grant certificates to persons being registered as dentists and shall grant certificates to persons passing any such examination. The board shall admit to such examinations any person desiring to be examined who has previously paid a fee of £5 5*s.* and has satisfied the board that he is a person entitled to submit himself for examination, provided that a subsequent examination may be allowed on payment of a further fee of £3 3*s.* and on such conditions as the board may determine.

Medical Libel Action.

Dr. Merrillees, resident medical officer of the Ararat Hospital, recently brought an action against Dr. Palmer and Mr. Hayman of Ararat for £2000 damages for alleged libel. It is satisfactory to find that the case has been settled out of court, but it involved some interesting points in medical ethics. Dr. Merrillees gave a public lecture on Alcohol in which he denounced those who ordered its administration in disease, and cited the case of a patient in the Ararat Hospital who nearly died after alcohol had been given by his locumtenent but recovered when treated by Dr. Merrillees without alcohol. Dr. Palmer and Mr. Hayman then declined to meet Dr. Merrillees in consultation and also inserted a notice in the local paper to this effect. This notice constituted the alleged libel.

Cerebro-Spinal Meningitis.

The Intercolonial Medical Journal of Australasia for August contains a report of a series of seven cases of cerebro-spinal meningitis occurring in the Children's Hospital, Melbourne, by Dr. W. C. Mackenzie, which is interesting from the extreme rarity of the disease in Australia. In two of the cases intra-cellular diplococci were found in the fluid obtained by lumbar puncture, a procedure found to be of value for the relief of symptoms as well as for diagnostic purposes. Only one of the cases was fatal with characteristic post-mortem appearances.

Sept. 10th.

Obituary.

EDWARD HARRIMAN DICKINSON, M.D. EDIN., F.R.C.P. LOND.

MUCH regret was felt by the medical profession generally in Liverpool, as well as by a large circle of lay friends, at the announcement of the death in his fifty-ninth year of Dr. Edward H. Dickinson, which took place on Oct. 10th. He had suffered for a considerable period from cardiac asthma, the attacks of dyspnœa at times being very distressing. Dr. Dickinson studied medicine at the University of Edinburgh and at St. George's Hospital, London. He graduated as M.D. at the University of Edinburgh in 1876, obtaining the gold medal for his thesis. He was elected a Fellow of the Royal College of Physicians of London in 1880, at the early age of 38 years. He was formerly lecturer on comparative anatomy and zoology at University College, Liverpool, and was honorary physician to the David Lewis Northern Hospital for upwards of 30 years—an appointment which he resigned in the spring of this year owing to failing health. Dr. Dickinson was a man of rich and varied accomplishments. Educated at Cheltenham and Trinity College, Oxford, he started the race of life well equipped to encounter its difficulties and to appreciate its enjoyments. Naturally of a refined taste, he took a keen interest in the fine arts and developed a critical discrimination in the choice of pictures. His love of all manly sports, especially on the moor and at the river-side, aroused in him an intelligent interest in all that appertained to country life. His sympathy with suffering, his generous nature, his staunch friendships, and his love of truth endeared him to all his friends, who sincerely lament his premature decease. He was twice married and leaves a widow and three children to mourn their loss. The interment took place on Oct. 15th, at Lamplugh in Cumberland.

THOMAS VINCENT JACKSON, F.R.C.S. EDIN., J.P.

BY the death of Mr. T. Vincent Jackson the medical profession has lost a prominent and honourable member and the town of Wolverhampton a spirited and high-minded citizen. Failing somewhat in health for some months past he finally succumbed to pneumonia after a brief illness, and died on Oct. 12th at his house in Waterloo-road. Born in London Mr. Vincent Jackson was educated at a private school at Brighton and afterwards at King's College, London. Later he entered as a medical student at University College and Hospital where by his industry and assiduity he obtained due scope for his intelligence and was rewarded by various posts in the teaching departments. He was appointed demonstrator of anatomy in the school, subsequently house surgeon at the hospital, and assistant in the ophthalmic department. Subsequently he became private assistant to Mr. Richard Quain, but his health failing he relinquished his London prospects and settling at Wolverhampton was elected a surgeon to the Wolverhampton and Staffordshire General Hospital. To this institution he devoted his services unremittingly to the time of his death. As a surgeon Mr. Vincent Jackson held a high position in the profession, his interest in this branch of the profession obtaining for him more than a local reputation, more particularly by his contributions to the study of lithotomy, perineal operations, and colotomy. He was one of the founders of the Pathological and Clinical Section of the Birmingham and Midland Counties Branch of the British Medical Association and in 1889 was elected president of the branch. On that occasion he delivered an address on the history of the medical profession down to the time of the Victorian era, closing a lucid and interesting sketch with the sound advice of a man who knew and felt what he uttered with the memorable—

> Improve the best, so shall your sons
> Better what you have bettered once.

Straightforward and sincere in his judgment he ever sought

to advance the interests of the profession and to maintain its dignity and honour. A somewhat impulsive manner, the outcome of an ardent temperament and sense of personal conviction, made him at times misunderstood, though those who knew him best felt that his heart was directed right. As a citizen Mr. Vincent Jackson was fully alive to his duties and responsibilities. Taking an active part in public affairs he was first a town councillor, then elected mayor in 1886, afterwards becoming an alderman in the city of his adoption. As a magistrate for the borough and for the county of Stafford he exercised his functions impartially and with care. As a type of a high-minded citizen, a firm friend, and an indefatigable worker in his profession he has left a noteworthy example to others. He died at the age of 67 years, leaving a widow to mourn her loss.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Galvanis, Professor of Surgery in the University of Athens and Surgeon to the Evangelismos Hospital.—Dr. Max Freudweiler, Assistant Physician for Hydrotherapy and Gymnastic Methods in the Zürich University Clinic.—Dr. H. von Wyss, Professor of Forensic Medicine in Zürich, at the age of 54 years.

Medical News.

UNIVERSITY OF CAMBRIDGE.—At a Congregation held on Oct. 10th the following degrees in Medicine and Surgery were conferred:—

Doctor of Medicine.—Charles Samuel Myers, Gonville and Caius.
Bachelor of Medicine and Bachelor of Surgery.—Harold Walker, King's; John Percy Lockhart Mummery, Gonville and Caius; John Bradford, Emmanuel.

Dr. L. Humphry has been appointed Assessor to the Regius Professor of Physic. In the present term the first M.B. examination will begin on Dec. 9th, the second on Dec. 9th, and the third on Dec. 10th. A paper explaining the changes in the third M.B. examination, which will come into effect next year, has been prepared by the Registrary and may be had by students on application.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* It is intended to establish a Propædeutic Medical Clinic in the Moabite Hospital with Dr. Renvers and Dr. Goldscheider as professors.—*Breslau:* Dr. Lesser has been appointed Extraordinary Professor of Forensic Medicine.—*Caracas:* Dr. J. de Villegas Ruiz has been appointed to the chair of Clinical Medicine and Pathological Anatomy.—*Königsberg:* Three of the professors of the medical faculty have refused to allow female students to attend their lectures, so that it is practically impossible for ladies to attempt to carry on medical study in this university.—*Sienna:* Dr. A. Andruci has been recognised as *privat-docent* of Operative Medicine and Dr. E. Modigliano as *privat-docent* of Pediatry.

LOWESTOFT HOSPITAL.—The annual meeting of the governors of this hospital was held on Sept. 2nd under the presidency of the Earl of Stradbroke. The report stated that, exclusive of £552 10*s.* donations placed to the capital account, the income had been £1799 and the expenditure £1684. At the close of the account there was a balance to the credit of the treasurer of £195. The capital account had been increased by the generous gift of £500 from the officers and men of H.M.S. *Hearty*, which sum, together with a cot complete in every way, was handed to the trustees in November last. A life donation of £52 10*s.* has been received from Mr. George Jewson and placed to the capital account.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly court of the directors was held on Oct. 9th, Mr. Christopher Heath, the President, being in the chair. Two new members were elected and the death of a member was reported. There were no fresh applications for grants. The death of a widow was announced who had been in receipt of grants since 1882 and had received £1084 10*s.* from the society, her husband having paid £28 as subscriptions. Applications for renewal of grants were read from 51 widows, 13 orphans, and five recipients from the Copeland Fund, and it was resolved that £1168 should be distributed among them at the next court. It was determined to make a Christmas present to the widows and orphans on the fund, the sum of £569 to be divided among them, thus disposing of the surplus income. The expenses of the quarter were £66 5*s.*

ROYAL COLLEGE OF SURGEONS IN IRELAND: FELLOWSHIP EXAMINATION.—The following candidates having passed the necessary examination have been admitted Fellows of the College:—Mr. J. M. Falkiner (Assam, India), Mr. G. A. Gunton (London), Mr. W. H. Langley (Nigeria, West Africa), and Mr. J. R. Macnamara (Assam, India).

BRISTOL GENERAL HOSPITAL.—Dr. A. J. Harrison, physician to the newly formed dermatological department of the Bristol General Hospital, will now be able to carry out the Finsen treatment for lupus, Sir William Wills having undertaken to defray the cost of the process for one year.

NORTH SURREY DISTRICT SCHOOL, ANERLEY.—There was a general muster of the officers and staff on Oct. 8th, when Mr. C. Bray (the superintendent), supported by Mr. H. J. Prangley (the medical officer), Mrs. Marsland (the matron), and others, made a presentation of a satinwood wardrobe and a purse of gold to Mr. and Mrs. Orpin, who are retiring on pension from their position at the schools. They have been at the lodge about 17 years. Mr. and Mrs. Walter Overton were appointed their successors.

NURSES' HOME AT ALTRINCHAM.—A new Nurses' Home in connexion with the Altrincham Provident Dispensary and Hospital was opened on Oct. 12th by the Duchess of Buckingham and Chandos. The accommodation in the hospital for the nursing staff being inadequate a convenient house close to the hospital was purchased at a cost of £1500. The whole expense of acquiring and fitting up the home has amounted to £3400. Towards this the trustees of the Altrincham Workhouse Charity have allocated the sum of £2000, and the remainder has been paid out of the reserve fund. The present buildings were erected in 1870 and in the following year the number of in-patients admitted was 28, while last year the number was 301.

THE FORTHCOMING ELECTION OF DIRECT REPRESENTATIVES.—We learn that Mr. George Brown, who seeks re-election, and Mr. George Jackson, F.R.C.S. Eng., who is also a candidate for a seat on the General Medical Council, will address the members of the Midland Medical Union, of which Mr. J. Goodwin Shea, J.P., of Chesterfield, is president, at their annual meeting to be held at the Masonic Hall, Nottingham on Wednesday, Oct. 23rd. At a meeting of the Medical Guild, Manchester, held on Oct. 16th, it was decided to invite Mr. Horsley and Dr. Woodcock to address a meeting at the Palatine Hotel, Manchester, on the 23rd inst., and Mr. George Brown and Mr. George Jackson to a meeting at the same place on the 24th inst. Dr. Glover to be invited to address either meeting as he shall prefer.

THE NATIONAL REGISTRATION OF PLUMBERS.—The Mayor of Derby, in presenting certificates of registration to several master and operative plumbers at the Guildhall, Derby, on Oct. 12th, said that the objects of the national registration of plumbers were such as to commend themselves to every thoughtful person. For some years the organisation had been seeking powers in Parliament to legalise the present voluntary system of registration to enable those employing plumbers to be satisfied that they were employing thoroughly efficient workmen. Those objects appeared to him to be thoroughly laudable, and he sincerely hoped that they would be achieved. As the health of people depended so much upon the plumbers, it was obviously necessary that the work should be carried out by competent and practical men. Alderman Richard Hind, mayor of Stockton-on-Tees and Renter Warden of the Plumbers' Company, referred to the work of the organisation, particularly with regard to the technical education of young plumbers. The object was to get more carefully educated and well-trained workmen through the medium of the technical classes. Sir Thomas Rowe, M.P., in expressing his sympathy with the objects, stated that he had been closely connected with the building trade all his life and was fully alive to the importance of plumbing work as affecting public health. He was entirely

in sympathy with the Plumbers' Registration Bill and would support the measure on all occasions.

BARKER ANATOMICAL PRIZE.—This prize of 20 guineas, open to all medical students of the United Kingdom, has been awarded to Miss Susan Forster Dickson, a student of the Royal College of Surgeons in Ireland.

DONATIONS AND BEQUESTS.—The late Mr. Thomas Kincaid Hardie, of 3, Hyde-park-terrace, London, has bequeathed to the Rothesay Victoria Hospital a sum of £500.—The committee of the North London Hospital for Consumption, Mount Vernon, Hampstead, has received a donation of £1000 to name a bed "in memory of the late Mrs. Henry Claudet, who died at Cannes."—The committee of the Cardiff Infirmary have received £1050 from an anonymous donor.

AN ISOLATION HOSPITAL FOR KINGSWOOD.—The medical officer of health (Mr. C. J. Perrott) of the urban district of Kingswood, near Bristol, is urging his council to provide an isolation hospital. There can be no doubt that one is needed, for the population of the district has increased during the last decade from 9000 to nearly 12,000 and during September there occurred 13 cases of typhoid fever, one of which terminated fatally.

WATER-SUPPLY OF THE BRIDGWATER RURAL DISTRICT COUNCIL.—Colonel A. Hepper, Local Government Board inspector, held an inquiry at Bridgwater on Oct. 10th into an application by the rural district council for sanction to borrow £24,000 for the purposes of carrying out a water-supply for six of the rural parishes. Evidence was given showing that the water used by the inhabitants from wells, and the like, was very impure and had led to outbreaks of infectious diseases.

GUY'S HOSPITAL.—Sir Joseph Dimsdale, M.P., Lord Mayor elect, has promised to preside at a Mansion House meeting to be held early in January next in furtherance of the appeal of this hospital for a renewal of public support. A sum of £180,000 is required to meet the cost of many works of renovation and extension rendered necessary by the age of the hospital and the constantly increasing demands upon its ministrations. The appeal also asks that the income of the hospital derived from voluntary sources may be increased to £25,000 per annum.

ENTRANCE SCHOLARSHIPS.—The following entrance scholarships have been awarded at St. Mary's Hospital Medical School:—Open Scholarship in Natural Science, value £145, W. L. Holyoak (Wyggeston Schools, Leicester); Open Scholarship in Natural Science, value £78 15*s.*, F. C. H. Bennett; Open Scholarship in Natural Science, value £78 15*s.*, L. Colebrook; Open Scholarship in Natural Science, value £52 10*s.*, E. Balthasar. University Scholarships of £63 each, W. E. Paramore (St. John's College, Cambridge) and H. E. Kitchen (Sidney Sussex College, Cambridge). Epsom Scholarship (by nomination), A. J. May (Epsom College).

ENTERIC FEVER AT PLYMOUTH.—At a meeting of the sanitary committee of the Plymouth Borough Council held at the end of September the medical officer of health (Mr. F. M. Williams) reported that from the last few days of August up to the end of September 34 cases of enteric fever had been notified. The enteric fever wards of the Borough Hospital were over-full (22 cases in wards to accommodate 16) and applicants for admission had to be refused. The outbreak had been traced to drinking water from storage tanks, defective house-drains, and to the disturbance of a filthy subsoil for the reconstruction of new sewers.

DUTIES OF DISTRICT MEDICAL OFFICERS.—At the meeting of the visiting committee of the Newton Abbot Board of Guardians held on Oct. 9th one of the district medical officers who had been requested to mention the salary he would require for attendance upon children in the new cottage homes of the guardians, stated that he would undertake the duties for a period of one year at a fee of £5 per home. One of the guardians considered that the medical officer should perform the duties without any extra remuneration as the children resided in his district, but the clerk disagreed entirely with that view, and eventually the matter was referred to the medical committee.

Messrs. George Jennings, Limited, have received a notification of appointment of sanitary engineers to His Majesty the King.

BOOKS, ETC., RECEIVED.

ALLEN, GEORGE, 156, Charing-cross-road, W.C.

John Bull: His Origin and Character, and the Present Condition of His Big Property, and Two other Papers on Education. By Cecil Reddie. Price 6*d.*

ARNOLD, EDWARD, 37, Bedford-street, Strand, W.C.

Phototherapy. By Professor Niels R. Finsen, Copenhagen. Translated from the German edition, and with an Appendix on the Light Treatment of Lupus. By James H. Sequeira, M.D.Lond., M.R.C.P. Price 4*s.* 6*d.*

CHURCHILL, J. & A., 7, Great Marlborough-street, W.

A Simple Method of Water Analysis, especially designed for the use of Medical Officers of Health. By John C. Thresh, M.D. Vict., D.Sc. Lond., D.P.H. Cantab. Third edition. Price 2*s.* 6*d.*

An Introduction to the Bacteriological Examination of Water. By W. H. Horrocks, M.B., B.Sc. Lond. Price 10*s.* 6*d.*

Outlines of Gynæcology, Pathology, and Morbid Anatomy. By C. Hubert Roberts, M.D. Lond., F.R.C.S. Eng., M.R.C.P. Price 21*s.*

A Manual of Practical Anatomy. By the late Professor Alfred W. Hughes, M.B., M.C. Edin., &c. Edited and completed by Arthur Keith, M.D. Aberd., F.R.C.S. Eng. In Three Parts. Part I., The Upper and Lower Extremities. Price 10*s.* 6*d.*

CONSTABLE, ARCHIBALD, AND CO., LIMITED, 2, Whitehall-gardens, S.W.

The Life of Pasteur. By René Vallery-Radot. Translated from the French by Mrs. R. L. Devonshire. Two volumes. Price not stated.

GEBR. BELINFANTE, The Hague, Holland.

Verslag van De Staatscommissie tot Voorbereiding van maatregele tegen Verontreiniging van Openbare Wateren. Published by order of the Government. Price not stated.

HEINEMANN, WILLIAM, London.

The Play of Man. By Karl Groos, author of "The Play of Animals." Translated with the author's coöperation by Elizabeth L. Baldwin, with a Preface by J. Mark Baldwin, Ph.D., Hon. D.Sc. Oxon. Price not stated.

HEYWOOD, ABEL, AND SON, Oldham-street, Manchester.

Blackpool as a Health Resort. By Thomas Carr, M.D. Durh., D.P.H., M.R.C.S. Eng., &c. Price 1*s.*

IDRIS AND CO., Pratt-street, Camden Town, N.W.

Notes on Essential Oils, with Special Reference to their Use, Composition, Chemistry, and Analysis. By T. H. W. Idris, F.C.S. Second edition. Price not stated.

LONGHURST, 62 and 64, Grey-street, Newcastle-on-Tyne.

Manipulation (or Massage). By John Andrew Peters. Price not stated.

MACLEHOSE, JAMES, AND SONS, 61, St. Vincent-street, Glasgow.

Archæology, Education, Medical and Charitable Institutions of Glasgow. Edited by Magnus Maclean. Published by the Local Committee for the Meeting of the British Association, Glasgow, 1901. Price 3*s.* 6*d.*

MACMILLAN AND CO., Limited, London and New York.

Experimental Hygiene: An Introductory Course of Work in the Principles of Domestic Science. By A. T. Simmons, B.Sc. Lond., and E. Stenhouse, B.Sc. Lond. Price 2*s.* 6*d.*

Practical Histology. By J. N. Langley, M.A., Sc.D., F.R.S. Price 6*s.*

REBMAN, LIMITED, 129, Shaftesbury-avenue, W.

A Manual of Bacteriology. By Herbert U. Williams, M.D. Second edition, revised and enlarged. Price 7*s.* 6*d.*

A System of Physiologic Therapeutics. Edited by Solomon Solis Cohen, A.M., M.D. Volume III.: Climatology, Health Resorts, Mineral Springs. By F. Parkes Weber, M.A., M.D., F.R.C.P. Lond., with the collaboration for America of Guy Hinsdale, A.M., M.D. In two books. Price 21*s.* the volume.

The Pocket Formulary for the Treatment of Disease in Children. By Ludwig Freyberger, M.D. Vienna, M.R.C.P. Lond., M.R.C.S. Eng. Third edition, revised and enlarged. Adapted to the new British Pharmacopœia. Price 7*s.* 6*d.*

The Surgical Anatomy and Operative Surgery of the Middle Ear. By A. Broca, Paris. Translated by Macleod Yearsley, F.R.C.S. Price 3*s.* 6*d.*

The Therapeutics of the Röntgen Rays. By Dr. E. Schiff, Vienna. Translated by W. Deane Butcher, M.R.C.S. Price 1*s.*

Water and Water Supplies. By John C. Thresh, D.Sc. Lond., M.D. Vict., D.P.H. Camb., &c. Third edition, revised and enlarged. Price 7*s.* 6*d.*

RICHARDS, GRANT, 9, Henrietta-street, Covent-garden, W.C.

The Mental Functions of the Brain. By Bernard Hollander, M.D. Freiburg i.B.), M.R.C.S., L.R.C.P. Lond. Price 21*s.*

The Case for the Factory Acts. Edited by Mrs. Sidney Webb, with a Preface by Mrs. Humphry Ward. Price 2*s.* 6*d.*

RUSSELL, W. R. AND CO., Limited, Paternoster-row, E.C.

How to Regain Health and Live a Hundred Years. By One who did it. Translated from the Italian of Lewis Cornaro. Fourth edition. Price 1*s.*

SCOTT, WALKER, Paternoster-square, E.C.

The Criminal. By Havelock Ellis. Third edition, revised and enlarged. Price 6*s.*

ST. JOHN AMBULANCE ASSOCIATION, St. John's Gate, Clerkenwell, E.C.

First Aid to the Injured. Arranged according to the Revised Syllabus of the First Aid Course of the St. John Ambulance Association by James Cantlie, M.A., M.B., F.R.C.S. First edition. Price 1*s.*; by post 1*s.* 2*d.*

SWAN SONNENSCHEIN AND CO., LIMITED, London.

Psychology, Normal and Morbid. By Charles A. Mercier, M.B., M.R.C.P., F.R.C.S. Price 15s.

VERLAG DER MEDICINISCHE WOCHE, G.m.b.H., Friedrichstrasse 19, Berlin, S.W.

Technik des ersten Verbandes. By Dr. Hermann Engel, Berlin. Price, paper M1.50; cloth M2.00.

VOGEL, F. C. W., Leipsic.

Lehrbuch der Physiologie des Menschen. By G. von Bunge, Professor in Basel. Vol. II. Price 15 marks.

WRIGHT, J. AND CO., Stonebridge, Bristol.

Illustrations from "First Aid to the Injured and Sick." By Dr. Warwick and Dr. Tunstall. Diagrams for the use of lecturers. Sets of 16 sheets, price 27s. 6d., or in single sheets.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

BARBOUR, J. M., M.B. Glasg., has been appointed Resident Physician, Mendip Hills Sanatorium, Hill Grove, over Wells, Somerset.

BONNEY, W. F. VICTOR, M.D., M.S. Lond., F.R.C.S. Eng., M.R.C.P., has been appointed Physician Accoucheur to the St. Pancras and Northern Dispensary.

DAVIS, HARRY, M.R.C.S., L.R.C.P., L.S.A., D.P.H. Cantab., has been appointed Medical Officer of Health for Callington, Cornwall.

HODGSON, J. F., M.B., Ch.B. Vict., has been appointed Resident Medical Officer of the Halifax Union Poor-law Hospital.

MATHESON, RODERICK M., M.D., M.S. Edin., has been appointed Honorary Assistant Surgeon to Noble's Isle of Man Hospital.

PARSONS, JOHN HERBERT, M.B., B.S., B.Sc. Lond., F.R.C.S., has been appointed Curator and Librarian to the Royal London Ophthalmic Hospital.

PEGGE, EDWARD VERNON, L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health for Briton Ferry, Glamorganshire.

RODGERS, R. CRAIG, M.R.C.S., L.R.C.P. Lond., has been appointed Honorary Medical Officer to the Burnley Victoria Hospital, vice Dr. James Mackenzie, resigned.

WHITE, MAURICE FORBES, M.B., Ch.B. Aberd., has been appointed Resident Surgeon to the Birmingham General Dispensary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BELGRAVE HOSPITAL FOR CHILDREN.—Honorary Dental Surgeon.

BETHNAL GREEN INFIRMARY.—Assistant Medical Officer. Salary at rate of £100 per annum, with furnished apartments, board, and washing.

BIRMINGHAM CITY ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £150 a year, with board, apartments, and washing.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon, unmarried, Salary £150 per annum, with rooms, fire, lights, and attendance.

BRADFORD ROYAL INFIRMARY.—House Surgeon, unmarried. Salary £110 per annum, with board and residence. Also Dispensary Surgeon, unmarried. Salary £100 per annum, with board and residence.

BRISTOL GENERAL HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with board, residence, &c.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, Sloane-square, Chelsea, S.W.—Honorary Surgeon.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Registrar. Honorarium 20 guineas per annum.

CORNWALL COUNTY ASYLUM, Bodmin.—Junior Assistant Medical Officer, unmarried. Salary £120, rising to £150, with board, apartments, laundry, &c.

DERBY COUNTY ASYLUM, Mickleover.—Junior Assistant Medical Officer. Salary £110, rising to £150 per annum, with apartments, board, washing, and attendance.

DERBYSHIRE ROYAL INFIRMARY, Derby.—Assistant House Surgeon for six months. Salary £30 for the six months, with board, residence, and washing.

DUBLIN, TRINITY COLLEGE.—King's Professorship of the Institute of Medicine (Physiology and Histology) in the School of Physic.

ESSEX COUNTY ASYLUM, Brentwood.—Junior Assistant Medical Officer. Salary £140 per annum.

GLOUCESTER GENERAL INFIRMARY AND GLOUCESTERSHIRE EYE INSTITUTION.—Assistant House Surgeon for six months. Remuneration at rate of £30 per annum, with board, residence, and washing.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident Medical Officer. Salary £300 per annum, with board and residence.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, W.—Senior Clinical Assistants for six months, renewable.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Surgeon, unmarried, for six months. Salary £20, washing allowance £2 10s., with board and residence; also Surgeon Dentist.

HUDDERSFIELD INFIRMARY.—Junior House Surgeon. Salary £60 per annum, with board, residence, and washing.

INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House Surgeon. Salary £75 per annum, with residence, board, and washing.

LEICESTER INFIRMARY.—Assistant House Surgeon. Salary £80 per annum, with board, apartments, and washing.

LONDON COUNTY ASYLUM, Hanwell, W.—Junior Assistant Medical Officer. Salary £150 per annum, with board, apartments, and washing.

LONDON DISPENSARY, 27, Fournier-street, Spitalfields, E.—Assistant Medical Officer. Salary £90 per annum.

MACCLESFIELD GENERAL INFIRMARY.—Junior House Surgeon. Salary £70 per annum, with board and residence.

MANCHESTER SOUTHERN AND MATERNITY HOSPITAL.—Resident House Surgeon.—Honorarium at rate of £50 per annum and board.

MORPETH DISPENSARY.—House Surgeon, unmarried. Salary £120 per annum, with rooms, coals, gas, and attendance.

NORTH LONDON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Fitzroy-square, W.—Clinical Assistant for six months. Honorarium at rate of £35 per annum.

PLYMOUTH BOROUGH ASYLUM.—Assistant Medical Officer, unmarried. Salary £150 per annum, rising to £200, with apartments, board, and washing.

PRETORIA CIVIL HOSPITAL, Transvaal.—Resident Assistant Medical Officer for three years, unmarried. Salary £300, £350, and £400, with board, lodging, and washing. Allowance of £60 on arrival in Pretoria for travelling expenses.

ROTHERHAM HOSPITAL.—Assistant House Surgeon. Salary £80 per annum, with board, &c.

ROYAL CORNWALL INFIRMARY.—House Surgeon, unmarried. Salary £100, increasing by £10 a year, with board and apartments.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Ventnor.—Resident Medical Officer, unmarried. Salary £150 per annum, with board and lodging.

ROYAL SEA BATHING HOSPITAL, Margate.—Resident Surgeon, as Junior for six months and then as Senior for the like period. Salary at rate of £80 and £120 per annum respectively, with board and residence. Also Honorary Visiting Surgeon and Honorary Assistant Visiting Surgeon.

ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Surgeon and Assistant Surgeon.

ROYAL VICTORIA HOSPITAL, Belfast.—Medical Superintendent. Salary £300 per annum, with board and apartments.

SALISBURY INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with board, lodging, and washing.

TEIGNMOUTH HOSPITAL, SOUTH DEVON.—House Surgeon. Salary £70 a year, with board, lodging, and washing.

WESTERN GENERAL DISPENSARY, Marylebone-road.—Honorary Physician.

YORK COUNTY HOSPITAL.—House Surgeon. Salary £100 per annum, with board, residence, and washing.

YORK DISPENSARY.—Resident Medical Officer, unmarried. Salary £110 a year, with board, lodging, and attendance.

The Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies for Certifying Surgeons under the Factory Acts at Buckingham; and at Ironbridge and Bridgnorth, Salop.

Births, Marriages, and Deaths.

BIRTHS.

COLLCUTT.—On the 14th Oct., at 2, S. Peter's-place, Brighton, the wife of Arthur M. Collcutt, M.B., of a daughter.

FOULDS.—On Oct. 8th, at Ashlea, Droitwich, the wife of Francis H. Foulds, M.R.C.S., L.R.C.P. Lond., of a daughter.

PERSHOUSE.—On Oct. 13th, at Chipchase, Hadley Wood, the wife of Frank Pershouse, M.R.C.S., L.R.C.P. Lond., of a son.

RAY.—On the 11th inst., at 48, The Crescent, Salford, the wife of John Howson Ray, Ch.M., F.R.C.S., of a son.

SMITH.—On Sept. 8th, at Cawnpore, N.W.P. India, the wife of Captain Herbert Austen Smith, I.M.S., of twins, boy and girl.

SPRAGUE.—On Oct. 7th, at Saffron Walden, the wife of W. Carr Sprague, M.D. Edin., of a son.

STANFORD.—On Oct. 7th, at Sutton Valence, Maidstone, the wife of W. Bedell Stanford, M.R.C.S., L.R.C.P. Lond., of a daughter.

MARRIAGES.

BROWN—PULLEN.—On Oct. 16th, at St. Helen's Church, Abingdon, Berks, by the Rev. H. T. Maitland, M.A., Thomas Henry Brown, M.A., M.B., B.C. Camb., of Hampton-in-Arden, Warwickshire, younger son of Thomas Brown, Hunstanton, Norfolk, to Isabel Mary, eldest daughter of Richard Pullen.

HANCOCK—LEUCHARS.—On the 15th October, 1901, at the parish church, Isleworth, by the Rev. J. H. Champion McGill, assisted by the Rev. C. A. Morgan, vicar of All Souls, St. Margaret's, Twickenham, George Charles Hancock, M.R.C.S., L.R.C.P., D.P.H. Lond., second son of Thomas Webster Hancock, of Treskelly, St. Margaret's, Twickenham, to Effie, only daughter of John Walter Leuchars, of The Chestnuts, St. Margaret's, Twickenham, and of Durban, Natal.

PRITCHARD—SILLS.—On Oct. 8th, at Barrowby Church, Grantham, Edward J. Pritchard, M.R.C.S., L.R.C.P. Lond., to Maud, youngest daughter of George Sills.

DEATHS.

DICKINSON.—On Oct. 10th, at 2, Grove-park, Liverpool, in his 59th year, Edward Harriman Dickinson, M.D., F.R.C.P.

LIVINGSTONE.—On Oct. 4th, at 17, Hill-street, Wishaw, Lanarkshire, James Livingstone, M.D., L.R.C.S.E., J.P., aged 67 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

"HOW DISEASE IS SPREAD."

AT Coventry, on Oct. 9th, a married woman was fined 2s. 6d. and costs for exposing her child suffering from scarlet fever. The town clerk said that there had been an extensive epidemic of scarlet fever in the city and remarked that it was useless for the authorities to spend money on isolation if patients were allowed to run about the streets. Quite so, but until the law deals more severely with people who for their own individual convenience endanger the community at large we fear there will be little, if any, improvement in this state of things. Only last week we commented on the case of a man who travelled from Leeds to Southampton knowing himself to be suffering from scarlet fever. In this case he was fined 40s. and costs, but if the maximum penalty of £5 were more often inflicted we should probably hear of these cases less frequently. Yet another case is reported from Marton, Lancashire, in which a child suffering from scarlet fever was on two occasions exposed on the public highway though the guardian of the child had been warned by the sanitary inspector that the patient must not leave the house until the rooms had been disinfected. In this case the magistrate remarked that in his opinion several of the additional cases reported (the medical officer in his evidence had stated that there had been one other case previous to the present one and there had been 28 cases since) had been brought about in consequence of the child in question being exposed. The fine was 10s. and costs in each case.

THE TREATMENT OF ASTHMA.

To the Editors of THE LANCET.

SIRS,—I should be very much obliged if you or any of your readers would advise me on the following case in the next issue of THE LANCET. A boy, aged 15 years, has suffered for five years from asthma with bronchial troubles. He is a strong boy except when the asthma attacks come on and has been brought up on a farm. His parents' residence is on a very bleak spot, almost surrounded by the sea and swept by every wind, especially the east. His parents have no relatives in any inland or sheltered place and are not in very good circumstances. The boy's education has not been carried out very well. Could you advise me in any way what to do for him? Is there any institution, farm, or any place in the three kingdoms where he would be received and get some education? His parents could only afford a very small outlay. They are of the better-class farmers but not well off. If the boy could get to some sheltered inland place he would most probably get over his attacks altogether.

I am, Sirs, yours faithfully,

Oct. 10th, 1901. M. B. T.

"HIGH FREQUENCY CURRENTS AND DIABETES."

To the Editors of THE LANCET.

SIRS,—In answer to S. L. B. W. (THE LANCET, Oct. 5th, p. 954) who desires information on the influence and application of Tesla's currents in diabetes, I am pleased to say that in many cases great good can be effected and the elimination of sugar reduced to a minimum. Failure by this means has been experienced, not infrequently, but attention to the following details will reduce the percentage of failures: (1) the cause of the glycosuria (as this should be reckoned as a symptom and not as a disease), and (2) the position of the electrode. 1. The cause may be (*a*) cerebro-spinal, from either tumours, extravasations, or simply hyperæmia in the region of the floor of the fourth ventricle itself or in the cervical or upper dorsal regions of the spinal cord, or (*b*) pancreatic, from disease of that organ. 2. The position of the electrode in (*a*) should be close to the occiput. The electrode should be small and the current at first sent through the resonator from the first or second coil of the solenoid, then through the third at the second séance, and so on until full power is reached. Ten minutes daily is quite long enough. In (*b*) the electrode should be large and placed over the region of the head of the pancreas, with full power of current from the commencement. A séance should last 15 minutes. The interval between the applications and the duration of the series will be best determined in each individual case by the temperature of the patient.

I am, Sirs, yours faithfully,

HORACE MANDERS, M.D. Brux., F.R.C.S. Eng.

Bentinck-street, W., Oct. 14th, 1901.

MEDICAL BOOKKEEPING.

MR. EDMUND SAYWELL, chartered accountant, of 6, Wheeler-gate, Nottingham, has submitted to us specimen rulings of books which he has specially prepared for the keeping of the accounts of the general practitioner. The day-book and attendance record are ruled to exhibit on one opening the attendances on a patient for a complete month, and any sums which may be paid by the patient, the totals of debits and credits at the end of the month being carried forward to the ledger, which latter is ruled for quarterly accounts and takes in 12 months at an opening. The private cash-book is designed to show the whole of the financial transactions of the practitioner, and from it he can ascertain at any time the exact state of his bank balance. As the result of our imaginary experience in visiting patients, giving the usual attention to their ailments, and receiving certain amounts from them on account of professional services; paying for drugs, instruments, horses, servants' wages, butchers' and grocers' bills, and rent and taxes; and crediting ourselves with our (still imaginary) receipts from investments, rents of property, &c., and also from patients' fees, and entering all these details up in the rulings provided by Mr. Saywell, we feel able to say that his scheme of medical bookkeeping is simple, convenient, and well suited to the requirements of the busy practitioner.

"A NEW 'CONSCIENTIOUS OBJECTION.'"

To the Editors of THE LANCET.

SIRS,—The great value of hæmoglobin preparations in certain morbid conditions being now well-established, it interested me to find a patient suffering from neurasthenia with anæmia professing a conscientious objection to taking one of the best known of these preparations on the ground of its being "blood," and therefore expressly forbidden in Holy Writ both to Jew and Christian. In their advertisement of this preparation it is set forth by the manufacturers that it consists in effect of dehydrated blood rendered palatable by the addition of glycerine and a little wine. This is certainly an improvement on what was, I believe, the original method of administering hæmoglobin (depicted with horrid realism in a picture entitled "Les Buveurs de Sang" in the Salon of 1898)—viz., the conducting of patients to the abattoirs, where the blood was handed to them in tumblers fresh from the severed vessels. One can understand objections apart from any question of creed being made to this method of taking a remedy. As, however, religious scruples and sickness are frequently of intimate association (men have died for conscience' sake before now), it is possible for this conscientious objection to a therapeutic agent likely to be much used in the near future to become widespread. The passages of Scripture on which it is founded are as follows. St. James, speaking in Acts xv. 19, 20, 21, says:—

> "Wherefore my sentence is, that we trouble not them, which from among the Gentiles are turned to God;
> But that we write unto them, that they abstain from pollutions of idols, and from fornication, and from things strangled, and from blood.
> For Moses of old time hath in every city them that preach him, being read in the synagogues every sabbath day."

And again in verses 28 and 29:—

> "For it seemed good to the Holy Ghost, and to us, to lay upon you no greater burden than these necessary things;
> That ye abstain from meats offered to idols, and from blood, and from things strangled, and from fornication," &c.

Also in Acts xxi. 25, the elders of the believing Jews addressing St. Paul say:—

> "As touching the Gentiles which believe, we have written and concluded that they observe no such thing, save only that they keep themselves from things offered to idols, and from blood, and from strangled, and from fornication."

These passages, as far as drinking blood is concerned, have reference to the charge in the Mosaic code to be found in Leviticus xvii. 10–14, the last verse of which runs as follows:—

> "For it is the life of all flesh; the blood of it is for the life thereof: therefore I said unto the children of Israel, ye shall eat the blood of no manner of flesh: for the life of all flesh is the blood thereof: whosoever eateth it shall be cut off."

And again in Deuteronomy xii. 23–24:—

> "Only be sure that thou eat not the blood: for the blood is the life; and thou mayest not eat the life with the flesh.
> Thou shalt not eat it; thou shalt pour it upon the earth as water."

The drinking of blood was also forbidden to Noah and his descendants in Gen. ix. 4. According to the Revised Version "life" may also be translated as "soul." Fraser, in his monumental work "The Golden Bough," points out that this belief that the life or soul of the animal was identical with the blood was not confined to the Jews. It was or is shared by widely divergent races as represented by the Esthonians, the Romans, the Arabs, some of the Papuan tribes and the North American Indians, who in consequence feared to drink it lest the soul of the animal should enter their bodies. On the other hand, it is interesting to note that in one more therapeutic measure we have been anticipated by the Chinese. In a work entitled "Social Life of the Chinese," by the Rev. Justus Doolittle, an American missionary, published in 1865, we read, p. 390:—

> "The Chinese here (Fuhchau) are in the habit of using as food the blood of several domestic animals, as fowls, swine, and goats. ..... Some sick people or those who are troubled with want of appetite are fond of the blood of the goat boiled with vinegar and onions or garlic. It is said that thus prepared the blood gives them a relish for their food."

As to modern Christians feeling scruples about taking blood, it seems to me (without, however, any wish to enter the arena of religious

controversy) that the reference to the synagogues in Acts xv. 21 (quoted above) supplies the reason for the injunction to the early Christians—they were not to scandalise the devout Jews by doing things repugnant to the Jewish code of morals and thereby causing prejudice against the New Religion. Fornication is, of course, forbidden elsewhere in the New Testament, but the objections to the other items have surely lost their *raison d'être* at the present day; else roast chicken would also be taboo and the only butcher for the Christian would be the kosher. As other medical men may meet with this objection and be nonplussed unless forewarned, I beg to offer the above suggestions for overcoming scruples. It is, I believe, mostly confined to that section of the religious community known as Plymouth Brethren, but it may become more widely diffused. There is no complaint so catching as a "conscientious objection."—I am, Sirs, yours faithfully,

J. S. MACKINTOSH, M.R.C.S. Eng., L.R.C.P. Lond.

Platt's-lane, Hampstead, Oct. 14th, 1901.

A PLANT-BEARING MAMMAL.

IN the October number of *Knowledge* Mr. R. Lydekker gives an interesting account of the striking peculiarity which is to be observed in the outer hair of the sloths inhabiting the tropical forests of South and Central America. The outer hair of these animals is more or less green in colour—a very rare tint among mammals—the object of this colourisation being apparently to assimilate the animal to its leafy surroundings. It has long been known that this peculiar green tint is due to the presence of algæ, but the subject has recently been reinvestigated by Dr. W. G. Ridewood, and it is these investigations which have suggested Mr. Lydekker's article. The algæ grow in transverse cracks of the outer sheath of the hair in the ai, but in the two-toed sloth the hair which lacks the outer sheath of the ai is furrowed with longitudinal grooves in which the alga flourishes. The species of the alga is also quite distinct in the two cases. After briefly discussing the question of "mimicry" Mr. Lydekker deals with the manner in which the growth of algæ is maintained from one generation of sloths to another. "The only rational explanation which presents itself is that the young sloths become infected with alga-spores from their parents. ..... Dr. Ridewood has pointed out that in very young individuals of the two-toed sloth a large proportion of the hairs are devoid of grooves, and it would therefore seem that the young sloths do not develop a growth of alga till about the time they are old enough to leave the maternal arms and hang independently on the leafy and lichen-clad boughs of their native forests."

THE PREPARATION OF WAX MODELS.

IN a paper read before the Philadelphia College of Physicians by Dr. J. F. Schomberg and published in the University of Pennsylvania *Medical Bulletin* appears some useful information on the making of wax models for clinical teaching and other purposes. The plaster of Paris used by dentists is recommended for the casts and is prepared for use by sprinkling it in handfuls or through a sieve into a basin of water until the water will absorb no more plaster. After the plaster is submerged the mass is stirred until it acquires a creamy consistence, when it is poured upon the skin. Previously, however, the surface of the part to be modelled is rubbed with olive oil or where hair is present with a stiff ointment such as resin cerate. The eyelashes should be well greased with vaseline. The following is the wax composition employed: white wax, one part; yellow wax, two parts; paraffin (about 54° C. melting-point), one part; starch, two parts; talcum, three parts. The wax and paraffin are melted together upon a water-bath in an ordinary double boiler, and the starch and talcum, previously mixed, are thoroughly stirred into the mass. "Either a small quantity of powdered carmine may be rubbed up with the starch and talcum, or it may be dissolved in alcohol and the necessary quantity poured in and stirred. The wax is now poured into the mould up to the brim and then poured back again into the receptacle. It is important in this first pouring to bring the wax rapidly into contact with the entire surface of the mould, otherwise indelible furrows will be produced in the resulting models. The pourings are now repeated until the model has acquired a sufficient thickness (ordinarily from one-quarter to three-eighths of an inch). It is then allowed to cool, after which the plaster cast is broken piecemeal from the model. Where there are no undercuts the model may often be removed from the cast without destroying the latter. To accomplish this the model must be removed before it is quite hard, while it still has some elasticity."

"SUPERFLUITY OF CATS."

THE *Evening News* of Tuesday, Oct. 8th, has the following:—

> "One of the strangest applications ever made was considered by the Works Committee of the St. Pancras Borough Council at its last meeting. A lady tendered for cremation in the public destructor sixty or eighty unwanted cats per diem, for which she was prepared to pay 1d. a head. As, however, it was stated that the home she conducts charges 1s. per cat, it was recommended that the application should not be entertained. Ultimately the matter was adjourned for further information from the Health Committee."

Persons who advertise for lost cats, we believe, usually receive from an anti-vivisection society circulars which by inference suggest that the advertiser's cat would probably be found in one of our scientific research laboratories. Such suggestions are hardly worthy of notice by intelligent people, and from the above paragraph it would seem that more cats than are required for purposes of science are to be found without robbing other people of their pets.

HOMES FOR EPILEPSY.

To the Editors of THE LANCET.

SIRS,—Would any of your readers tell me of an institution where a young man subject to epileptic fits could be taken by paying a small sum per week? I should esteem it a great favour if anyone could inform me.

I am, Sirs, yours faithfully,

Oct. 17th, 1901. M.D.

STEPNEY OLD CHURCH.

ART and antiquity have suffered irreparable loss in the destruction by fire of the chancel of Stepney Church, a building dating from 1485. The glass and the carved work of roof and stalls can, of course, never be really replaced. The church is celebrated for its monuments which are remarkable either for commemorating famous men or for the curiousness of the inscriptions upon them, of which the following is an example. The simplicity and dignity of the language, as well as the commemoration of the fate which overtook the hapless family, may be commended at the present juncture to the anti-vaccination fanatics.

> "Here Thomas Saffin lies interred—Ah why?
> Born in New England, did in London die.
> Was the third son of eight begot upon
> His mother Martha by his father John.
> Much favoured by his prince he 'gan to be,
> But nipt by death at th' age of twenty-three,
> Fatal to him was that we small-pox name,
> By which his mother and two brethren came
> Also to breathe their last nine years before,
> And now have left their father to deplore
> The loss of all his children with his wife,
> Who was the joy and comfort of his life.
> Deceased June 18th, 1687."

QUERIES ABOUT NEW ZEALAND.

A CORRESPONDENT wishes to know whether any of our readers can give him information on the following points: (1) the name of the best New Zealand medical journal; (2) up-to-date works descriptive of the country; (3) is it a good healthy country to live in and is there plenty of sunshine?

H_3BO_3.—The subject which our correspondent refers to has been dealt with again and again in our columns. Little more need be said until the report of the Departmental Committee appointed to investigate the use of preservatives in food is published and we learn that this report has already been laid upon the table of the House of Commons.

Mr. A. Lemarchant.—1. We fancy that there is no limit of time other than the statutory limit allowed for ordinary debts. 2. The ordinary notification slip is generally allowed as a claim, and we do not think that the local authority in question has any right to demand that another set of certificates should be forwarded.

Major.—We think that B was wrong to conduct such a canvass unknown to A.

D. M. K.—We think our correspondent must have a claim.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 17th, 1901.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Oct. 11	30·16	W.	...	63	56	48	53	55	Raining
,, 12	30·10	E.	...	91	63	51	51	53	Foggy
,, 13	30·09	S.E.	...	76	58	50	48	52	Foggy
,, 14	29·94	S.E.	...	78	59	48	49	51	Hazy
,, 15	29·79	S.E.	...	69	58	47	47	49	Foggy
,, 16	29·59	S.E.	0·05	68	58	49	53	54	Raining
,, 17	29·42	S.	0·43	106	64	52	53	54	Fine

During the week marked copies of the following newspapers have been received:—*Sunday Times, Liverpool Daily Post, Yorkshire Post, Surrey Advertiser, Cardiff Mail, Morning Advertiser, Hertfordshire Mercury, Reading Mercury, Windsor and Eton Express, Mining Journal, Bristol Mercury, Leeds Mercury, Deutsche Medicinische Wochenschrift, Notts Express, Glasgow Herald, Sunderland Echo, Birmingham Gazette, Evening Standard, Standard, Bridgwater Mercury, Vanity Fair, The Globe, Science Siftings, Scientific American, Literary Digest, Engineer, &c.*

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (21st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.) West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (22nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

WEDNESDAY (23rd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.).

THURSDAY (24th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

FRIDAY (25th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square, (9.30 A.M.).

SATURDAY (26th).—Royal Free (9 A.M. and 2 P.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.), Throat, Golden-square (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (22nd).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Paper:—Dr. H. Campbell Thomson: Acute Dilatation of the Stomach, with illustrative cases.

WEDNESDAY (23rd).—DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND (20, Hanover-square, W.).—4.30 P.M. Informal Exhibition of Cases. 5 P.M. Meeting.

HUNTERIAN SOCIETY (London Institution, Finsbury-circus, E.C.).—8.30 P.M. Clinical Evening.

FRIDAY (25th).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Exhibition of Clinical Cases followed by Discussion. Patients will be in attendance from 8 P.M. to 9 P.M.

INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH (Hotel Cecil, Strand, W.C.).—5 P.M. Annual General Meeting. Prof. A. Wynter Blyth: Ventilation (Presidential Address). 7 P.M. Annual Dinner.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (21st).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. J. Pringle: Clinique. (Skin.)

POST-GRADUATE COLLEGE (Lecture Room, West London Hospital, Hammersmith-road, W.).—Mr. R. Lloyd: The Administration of Anæsthetics in Nose, Throat, and Mouth Cases.

TUESDAY (22nd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. R. L. Bowles: Clinique. (Medical.)

POST-GRADUATE COLLEGE (Lecture Room, West London Hospital, Hammersmith-road, W.).—Mr. Baldwin: Minor Surgery.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Sir W. Gowers: Cases in Hospital.

WEDNESDAY (23rd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Berry: Clinique. (Surgical.)

POST-GRADUATE COLLEGE (Lecture Room, West London Hospital, Hammersmith-road, W.).—Mr. Eccles: Surgical Anatomy.

LONDON THROAT HOSPITAL (204, Great Portland-street, W.).—5 P.M. Dr. Stoker: Chronic Glandular Diseases of Naso-Pharynx. (Post-Graduate Course.)

THURSDAY (24th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Clinique. (Surgical.)

POST-GRADUATE COLLEGE (Lecture Room, West London Hospital, Hammersmith-road, W.).—Dr. Ball: The Examination of the Throat and Nose.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Colman: Clinical Demonstration.

CHARING-CROSS HOSPITAL.—4 P.M. Dr. Eden: Gynæcological Cases. (Post-Graduate Course.)

LONDON TEMPERANCE HOSPITAL (Hampstead-road, N.W.).—2 P.M. Dr. S. Fenwick: Clinical Demonstration.

FRIDAY (25th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. StClair Thomson: Clinique. (Throat.)

POST-GRADUATE COLLEGE (Lecture Room, West London Hospital, Hammersmith-road, W.).—Dr. Saunders: Therapeutics.

LONDON TEMPERANCE HOSPITAL (Hampstead-road, N.W.).—2 P.M. Dr. P. Parkinson: Clinical Demonstration.

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Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

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